a W. R. C. Smith publication

Textile Industries

Formerly "COTTON"

OCTOBER, 1955

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ALL NEW!
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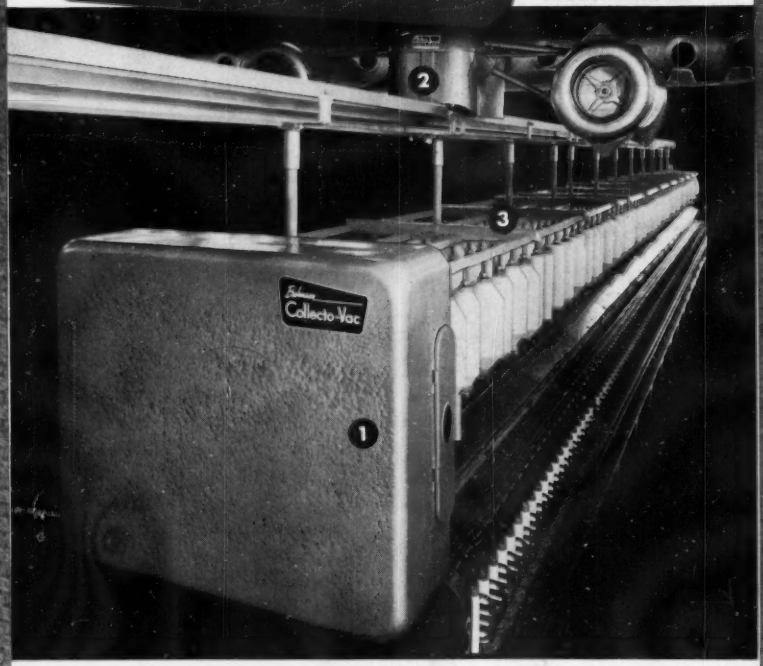
*Packaged Modernization



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★ Over-all engineering planning

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❷ Cross-Jet Cleaner
❸ Open-Aire Creel
DESCRIBED ON PAGE 13

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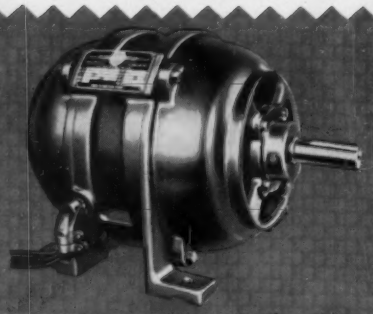
Next Month: TI's 16th Modern Equipment and Processing Review



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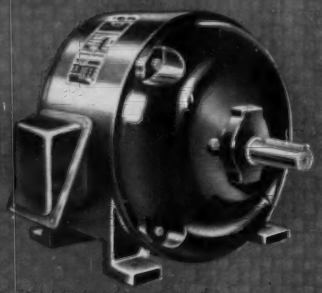

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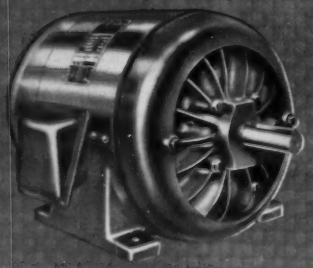

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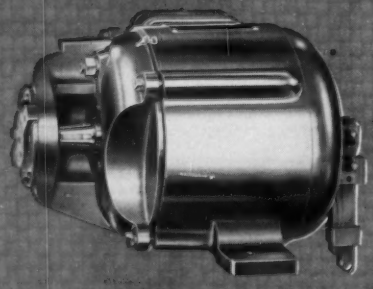

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- ☐ Consolidated Motor Catalog and Price List No. TI-3310
- ☐ Power Transmitter Bulletin No. TI-3126

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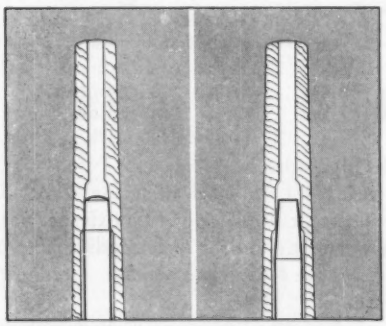

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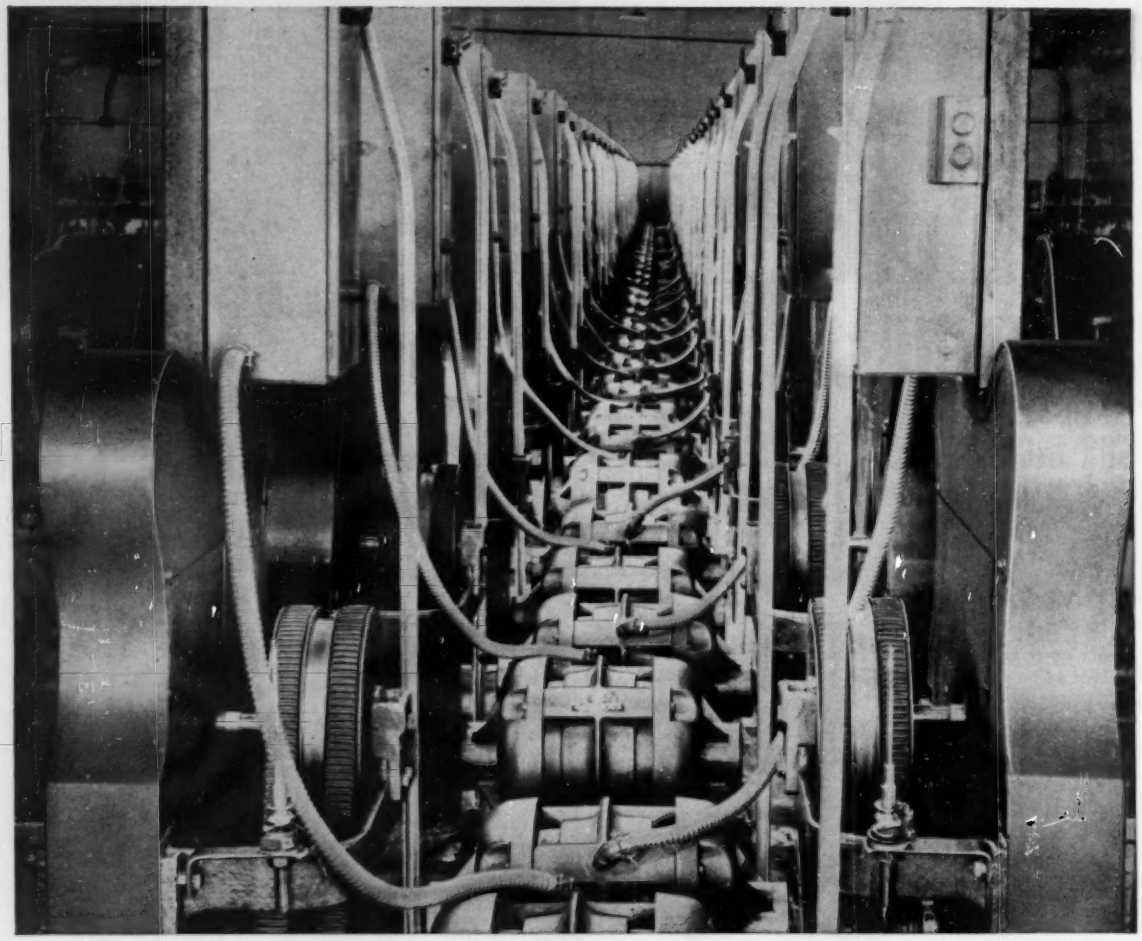

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Textile Industries

Formerly "COTTON"

Vol. 119, No. 10
October, 1955

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Shorts and Remnants

By J. C. C.

► The year rolls along and here we are at October already. It doesn't seem so. And October certainly must have something to do with Octo for eight—like an Octagon for eight sides or for soap. But then the calendar is still all cockeyed, because it says here that October is the tenth month and so it is.

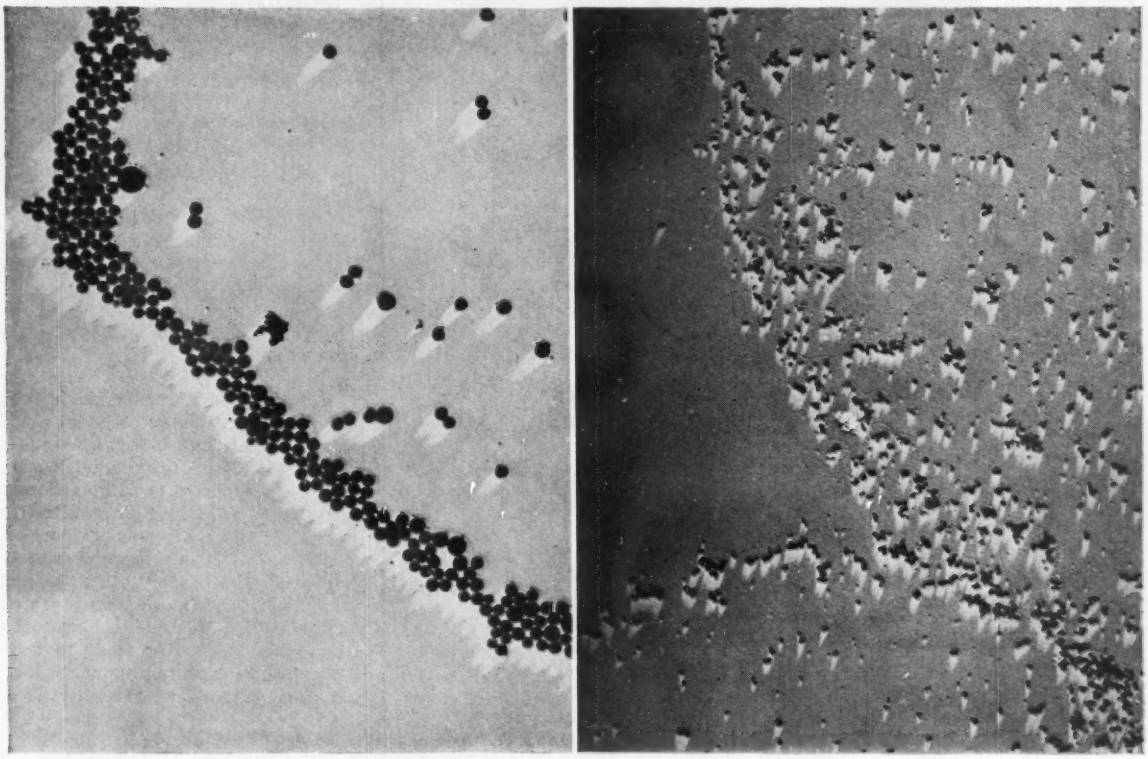
► Old S & R could get the history lesson over right fast with the story about "In 1492 Columbus sailed the ocean blue." It had to be 1492 because nothing else would rhyme with "ocean blue." Just suppose it had been 1496—"In 1496 Columbus sailed the ocean????" What would the poet have done? You see, it had to be 1492 and October 12th when the good ships Nina, Pinta, and Santa Maria landed on the shores of the New World. Note that we don't say where. At least two places down in the West Indies claim Columbus' landing spot. We can't take sides, as we may have readers in both. Everybody wants to get into textiles, you know.

► In fact, maybe we hadn't better say too much about Columbus since good old Lief Ericson, son of Eric the Red, discovered the new world at Vinland (not New Jersey) around 1000, and we have some good readers in Norway or Sweden or Minnesota, wherever Lief came from. This here magazine is world wide, and there may be some readers who hold with Amerigo Vespucci who certainly landed on the mainland and got America named after him.

Old S&R figures the world has flattened out like folks back there thought. Friend of ours up in the mountains of North Carolina gets television programs from almost 200 miles away; so that old earth curve just went away, I guess. Wonderful thing—television—he gets educational and enlightening things like baseball, prize fights, and old movies just as if he lived in the city.

► As we said, S&R gets around here and there, and we don't want to make any one mad. Just this past month two (2—count 'em) readers

ELECTRON PHOTOMICROGRAPHS (10,000X) compare normal size latex particles (left) approximately 0.25 micron (2500Å) in diameter, with those of new, small-particle size CHEMIGUM LATEX, approximately 0.05 micron (500Å) in diameter.



Here's what you'll gain

with new, small particle size

CHEMIGUM LATEX

IF you're now using latex in sizes, saturants, finishes, dye vehicles or adhesives, here are the advantages of changing to new, small-particle size CHEMIGUM LATEX: Better binding action. Improved wetting and penetration. Easier handling. Greater resistance to discoloration. Lower costs.

If you are not using latex in any of the many possible ways, here are some of the product improvements you can effect with new CHEMIGUM LATEX: Better feel and drape. Greater body. Higher strength and dimensional stability. Increased resistance to washing, wearing, wrinkling, raveling, tearing, snagging and sliding.

The new CHEMIGUM LATEX is a nitrile rubber dispersion exhibiting the following properties: Medium or high acrylonitrile content. A particle-size about one-fifth that of regular latex—about 20% smaller than other small-particle latices. Low specific gravity. Very high mechanical stability. Low viscosity and surface tension. Ready precipitation by ions.

Details on how the new, small particle-size CHEMIGUM LATEX can help your product are yours by writing:
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"THOSE DAYS ARE GONE FOREVER"

The Dyer: From a Woodcut, 1568

The forty-hour week was a thing unheard of in those days. The old gentleman above was plenty tired and hungry because he was forced to apply colors the hard way. Fortunately, modern MORTON SYSTEM DYEING MACHINERY has changed all this.

With the MORTON SYSTEM, packages or raw stock may be dyed evenly, automatically, economically and in a minimum of time. The installation shown below is in daily production on yarn wound on Barber-Colman cheeses for use in fancy ladies' dress goods.

Any size lot of packaged yarn or any number of beams may be dyed in a common dyebath or operated as single units on separate colors. Excellent for large lots, just right for small lots of different colors.

PACKAGE DYEING AND DRYING MACHINERY—MORTON MACHINE WORKS, COLUMBUS, GA.

THE MORTON SYSTEM DYEING MACHINERY

MORTON

MACHINE WORKS, INC.

COLUMBUS, GEORGIA U. S. A.

Shorts and Remnants

writing to us asked that we please not run their letters in Shorts & Remnants. OK—we won't even run the letters without the names. The one in S. C. offered to write us a nice letter about how he likes TEXTILE INDUSTRIES if we want it to use in S&R. So, when he sees this, all will be forgiven if he will promptly do so. We want to make friends and influence people.

► Some good TI readers doubt that now and then. We got a lot of comment on that Tufted Textiles section (June 1955). Some folks didn't like it, but we ran out of reprints and are still getting requests from good readers like **Celanese Corporation of America,** N. Y.; **Southern Research Institute,** Birmingham, Ala.; **George P. Fairley,** Dir. Thomas Bonnar & Co. (Canada) Ltd., Montreal, etc., and letters from folks who want to buy secondhand tufting machinery, jute backing, etc. Also, we get letters like this:

> "Nous vous saurions gre de bein vouloir nous procurer deux exemplaires de la revue TEXTILE INDUSTRIES, juin 1955" . . .
> FABELTA
> Bruxelles, Belgiun

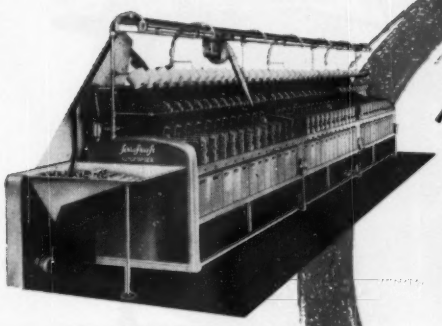
or this:

> "Please send us to above address 2 sets of reprints. . . . We run a mill as described in your section and have read with great interest the details of your information. . . . Our mill also had a very rough going at the beginning a couple of years ago and we still have it once in a while. . . ."
> WALTER PAUL WITTE
> Buenos Aires, Argentina

So you see, that calls for another Tufted Textiles issue next June. Look for it.

► While we are about it, we might mention that the announcement is already out for the 19th Southern Textile Exposition at Greenville, South Carolina, October 1-5, 1956. It will be bigger and better than ever. So look out for our October issue next year, covering this Show, and plan to attend.

► Old S&R may be off on his yacht at that time. His telephone rang the other day and a voice at the other end said "If you can answer this question, you will be rich." Only



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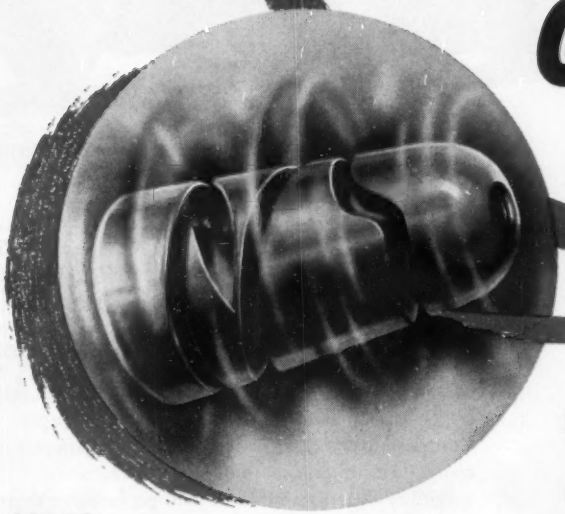
ROTARY YARN GUIDE



SPEED = *lower investment costs*

SPEED = *higher production*

SPEED + *rotary yarn guide* = *no yarn guide wear*

SPEED + *yarn guide design* = *no yarn damage*

SPEED + *quilling know-how* = *superior filling quality*

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Whatever your latex application, you can bet Naugatuck, the pioneer in synthetic and natural latices, has the latex you need... or will compound it to suit your particular application, for Naugatuck has compounded more new varieties of synthetic rubber than all other laboratories. For further information on Naugatex, and its most recent developments, write to us on your company letterhead.

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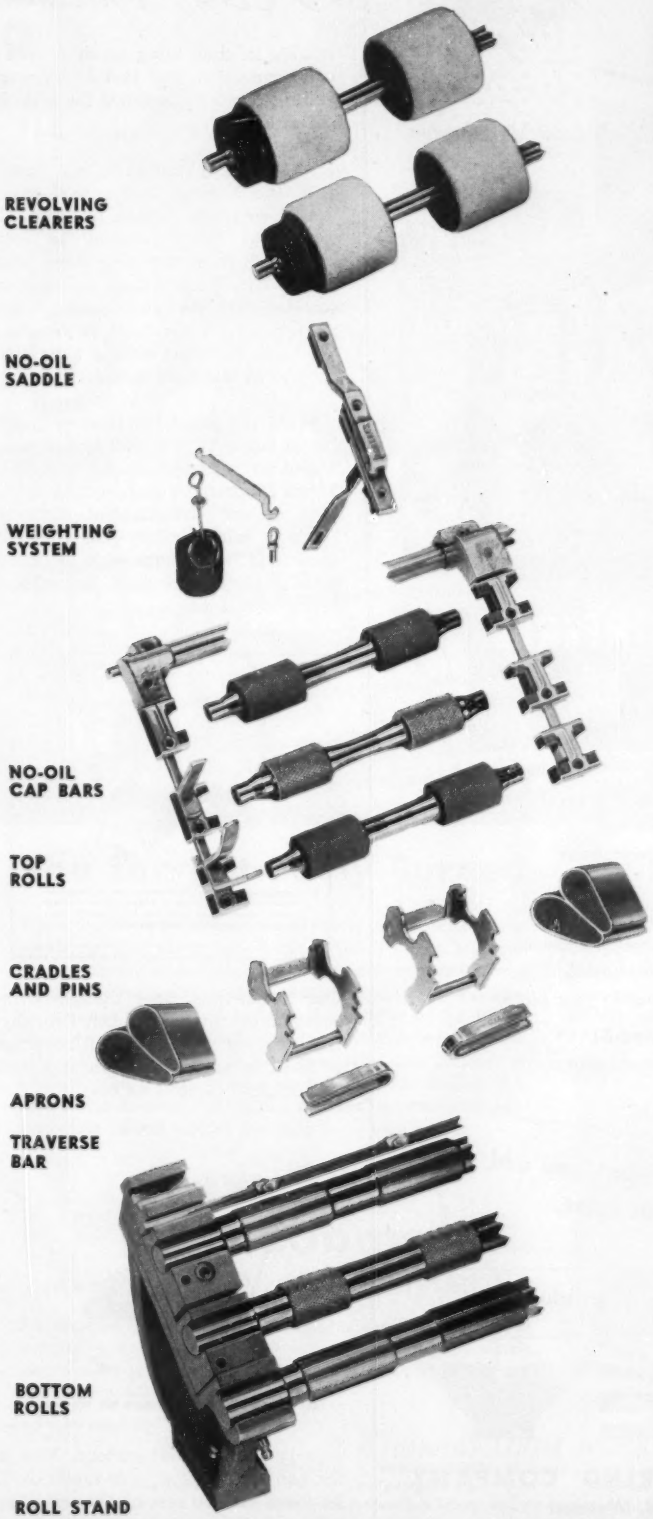
ROBERTS HIGH DRAFT SPINNING



SIMPLEST . . . MOST EFFECTIVE AND LEAST EXPENSIVE

This "exploded" view of the Roberts High Draft System highlights the small number of parts in the most successful drafting system in the world today. Leading mills using 2,000,000 spindles of Roberts High Draft get higher break factors, lower ends down, better yarn evenness and greater consistency of performance. Because of its simplicity, it has a lower first cost and lowest maintenance.

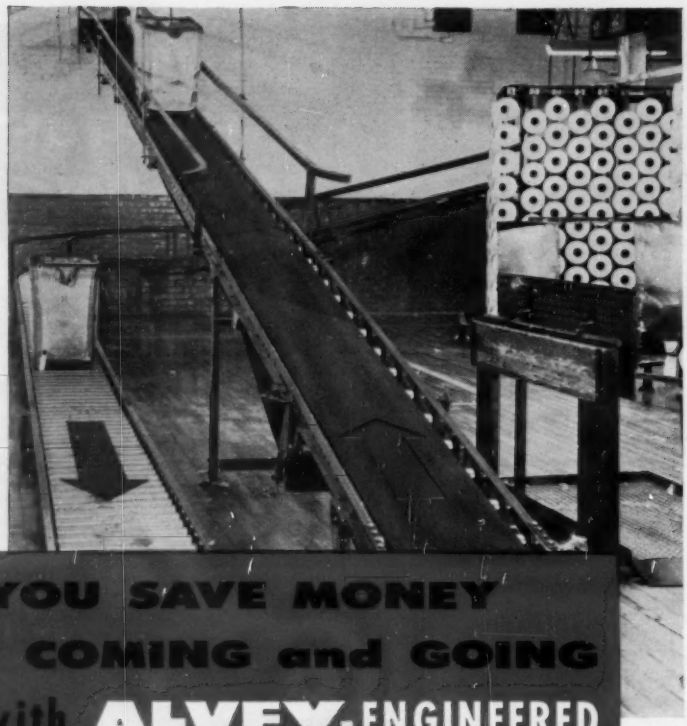
It is a true double-apron system, simple and uncluttered with all variable elements omitted. It has no bearing gadgets, pendulum systems, springs, pivots or other elements to vary from spindle to spindle or month to month. It features the narrowest possible cradle, apron and cot consistent with the gauge, providing maximum cleaning space between elements and most effective weight distribution. Top roll settings are positively set and maintained by the No-Oil cap bar and the No-Oil saddle provides proper and unchanging weight to the rolls. Top roll and bottom roll lubrication is reduced and eliminated. Not shown but an integral part of the Roberts High Draft System is strengthened draft gearing using hardened gears and studs plus an increase in the head-end roll neck diameters.

2,000,000 SPINDLES are now equipped with ROBERTS HIGH DRAFT

Roberts Spinning Frame Modernizations include Streamliner creels for larger packages, ball bearing cylinders and tape tension pulleys, increased traverse on bobbin, roller bearing spindles, rings and ring holders, motors and drives, and all accessories. Spinning frames are also available in all gauges.

Write us for a complete brochure and please mention this magazine

ROBERTS COMPANY
Sanford, North Carolina, U.S.A.



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9306 Olive Street Road, St. Louis 24, Missouri
Branch Offices in Principal Cities

178

Shorts and Remnants

trouble is, they hung up or it was a bad connection, and just as we were getting our wits together for a do or die attempt.

► That guy from Dallas, Texas, with the National Cottonseed Products Association is back in again. He says that "Bulls should be kept separated from the cow herd until Dec. 1 . . . " and "Corn is excellent for hogs if its 'shortcomings' are made up. . . " We don't know about the bulls, but that corn is a familiar subject in this here column.

► At the Southern Hosiery meeting at Roanoke, Va., last month some friend put a page from the *Richmond Times Dispatch* of August 25th in our box. Seems the Central National Bank of said fair city had an ad in there and he thought we'd be interested in the cartoon used. Reproduced below is that ad:

Measure it any way you want to...
... making given you as much in time-saving convenience for as little ... as a checking account at Central National. Makes bill paying easy. Just write checks ... mail them ... and the job is done. No running all over town to pay bills in person. Make your living easier ... with a checking account at THE CENTRAL NATIONAL BANK.

Our friend must have thought it resembled our own ad of last Feb. saying TI gives you more mill coverage of knitting and all textiles and with our original cartoon as below:

Textile Industries gives you more mill coverage
of knitting and all textiles

Somebody liked that cartoon. Now if the bank will just give us credit we'll let them use the rest of the series on how well TI covers textiles.

You can get Badly Burned . . . with "Matches" like this!

When the filling patterns of two identical cuts of cloth fail to match up, then the trouble begins. And it's often multiple-trouble, hard to track down and correct. Such uneven weaving may be due to a faulty let-off, or to the lack of a precision take-up, or other mechanical lacks or deficiencies in the looms, which may be unadaptable to modern production requirements.

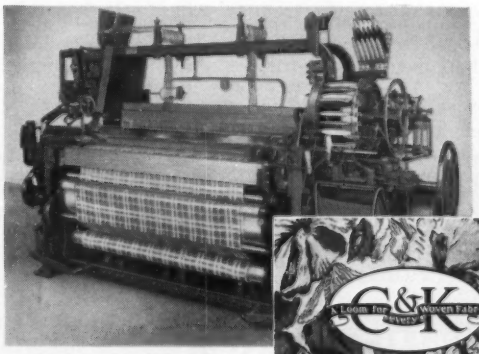
We do not claim that M-P means "Millenium Present" or anything like it. But modern-minded mills are finding that M-P looms do mean the "Most Protection" against profit-sapping cloth defects such as this. And that's why . . .

New C&K M-P Looms

mean More Profit to any Mill

For the design of C&K's new Multi-Purpose Looms includes features in the composite let-off and precision take-up which maintain uniformity of cloth tension, and give a more uniform rate of yarn-delivery from the beam.

C&K's new loom line is called Multi-Purpose because it is completely new, unmatched in versatility and quick convertibility to meet changing requirements in fibres, fabrics and fashions. For the complete mechanical story on these completely new M-P Looms, and how they can mean More Profit to you . . . see C&K today.



Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Charlotte, N. C. • Philadelphia, Pa. • Allentown, Pa.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are WOVEN fabrics.

SHOULD THIS MAN BE ON MANAGEMENT'S TEAM?

In molding employee opinions, in leading group thinking, in "Passing The Word" from supervisors, this man plays as important a part in mill operation as in his all-important work with his wrenches and other tools!

His knowledge of the objectives of management and his understanding of management's philosophy determine the very "vocal" voice he will give to company actions.

Southeastern Engineering Company has developed a successful twelve-hour conference training program in Waste Reduction and Waste Control to aid in giving your Section Men and Fixers the knowledge—other than mechanical—they need in today's competitive economy.

The effects of waste on unit cost and job security; quality losses and their effects; the cost of supplies; the importance of standard competitive job loads; how efficiency affects cost . . . these are a few of the topics discussed with your men.

The good ideas and suggestions that come out of this twelve-hour program will prove of value to your mill. We will appreciate the opportunity of discussing this service with you.

SOUTHEASTERN ENGINEERING CO.

WEST POINT, GEORGIA

Ben H. Crawford
West Point, Georgia

James I. Teat
Box 96-C, Closeburn Road
Charlotte 3, North Carolina

Shorts and Remnants

Hungarian Shuttleless Loom

"How may we obtain further information on the Hungarian Shuttleless Loom [July '55 p. 51] . . . "

ORRIE DE NOOYER
VP. Julius Forstmann & Co., Inc.
Passaic, N. J.

" . . . Would you please advise where such a device could be purchased or where such information could be found."

HARRY A. GROBAN
Dresden Mills, Inc.
Dresden, Ohio

"Please send us all the pertinent information you have on the Hungarian shuttleless loom. . . . "

JAMES W. SCOTT
Dixie Textile Machine Co.
Greensboro, N. C.

► To the above and other inquirers on this subject, the item we carried contained all the information sent us by the Hungarian News and Information Service. Our editors didn't attend the "Conference at the Summit." However, they did do some digging (see page 127).

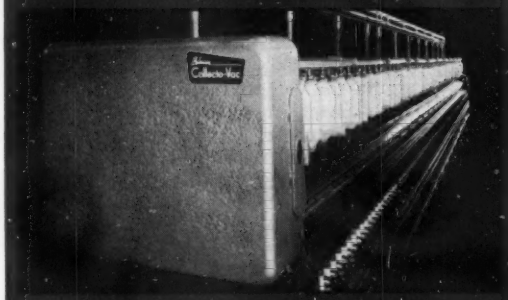
► The warden at State Penitentiary, Menard, Ill. **(Ross V. Randolph)**, wants to buy clean rags 24" long and 24" wide for their rag rug program. The Dept. of Labor, State of N. Y. wants data on Flammable Fabrics [Oct. '53]. Ashwin Industrial Works, Abmedabad, India, wants machinery to make spindles and bolsters; **P. C. Singal** G-1 SBM Colony, New Delhi, India, wants data for job descriptions for their weave room. A Canadian mill is investigating splicing of ply yarns and wants to know speed of drying and name of a supplier of a fast drying compound ["Knotless Tufting Yarns," June '55 p 165]. **Emmet W. Bringle** Nat'l Cotton Council of America, Washington, D. C., wants information on development of vacuum cleaners for spinning frames [July '55 p. 84]. **G. E. Anderson,** Dir. Compania Mercantil Textil, Lima, Peru, S.A., goes back to June 1952 to tear out a card to ask for catalog on machinery parts. **C. H. Bayley,** Nat'l Research Council, Ottawa, Can., and **K. M. DeCossas,** SRRL, New Orleans, La., want reprints on "Fibers for the Future" [Jan. '55].

► All in all, we keep busy and things are normal at 806 Peachtree

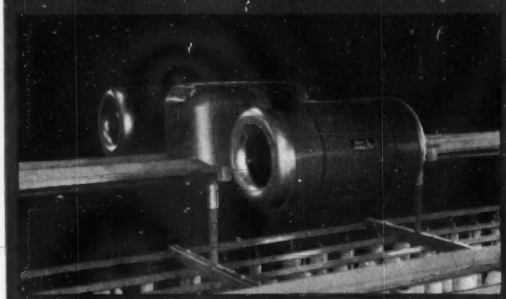
Bahnson PM* Plan

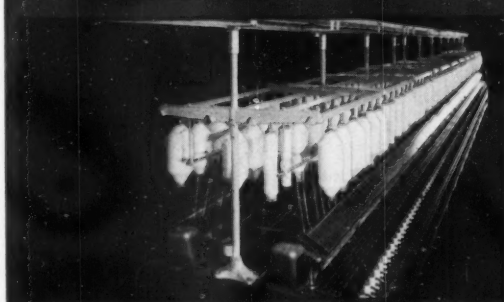
Introducing NEW Products for *Packaged Modernization . . . Key to Top Quality, New Savings!

Now, with these sensational new developments, Bahnson alone in the textile field offers you complete Packaged Modernization in vacuum collection, cleaning, air conditioning! Co-ordinated engineering, group installation, one-source service and undivided responsibility combine to give you maximum production, superior quality, added savings—all at a *one-package price* never before possible! Plan now . . . to plan with Bahnson!



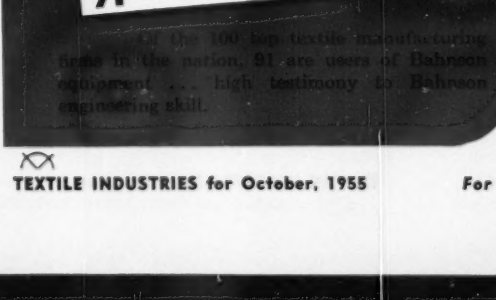
COLLECTO-VAC





CROSS-JET CLEANER

OPEN-AIRE CREEL



91 OF THE TOP 100

Of the 100 top textile manufacturing firms in the nation, 91 are users of Bahnson equipment . . . high testimony to Bahnson engineering skill.

NEW COLLECTO-VAC

- A new, improved vacuum collector with simplified construction for easier maintenance.
- Anodized aluminum flutes eliminate flute warpage . . . provide smooth surfaces and minimize static.
- Angular entry provides even pressure distribution.
- Bahnson-designed fan gives high suction efficiency with low power requirements.

NEW CROSS-JET CLEANER

- Rotating nozzles clean spinning frame and all overhead surfaces.
- Self-propelled on overhead or standard weight creel-mounted track.
- Double duty — use on alternate frames only; cuts number of units and track footage up to 50 per cent.
- Saves on initial cost—saves on maintenance.

(Bahnson also offers the Duo-Blast Loom Cleaner and the Allred Ceiling Cleaner.)

NEW OPEN-AIRE CREEL

- Open-top construction allows unobstructed air-blast from overhead cleaner to all parts of frame.
- Smooth, streamlined surfaces prevent lint and fly from collecting on creel structure.
- Top suspension bobbin holders reduce operating costs.
- Larger packages: New arrangement permits running 12" x 6½" or larger packages.

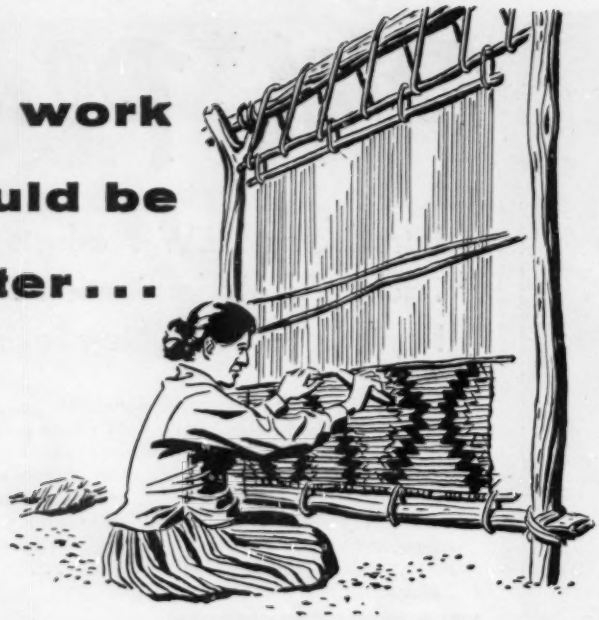
AIR CONDITIONING

Whether your need is for one room or an entire plant, our textile-trained engineers have the correct answer, backed by forty years' experience and the largest research program in the textile air-conditioning industry. Single units or complete installations . . . whatever your problem, *bring it to Bahnson* for engineering know-how and superior equipment.

AIR CONDITIONING • CLEANING • VACUUM COLLECTION

Bahnson COMPANY
WINSTON-SALEM, N. C.

Her work would be better . . .



if the warp threads were sized with *Clinton*® starches

You can count on Clinton starches to do a consistently good sizing job on every warp thread . . . to make your weaving easier, better.

Clinton starches give you the dependable quality that makes yarns weave at high efficiencies . . . turn out first rate textiles that'll pass the most discriminating inspector's final check. In fact, many mills use Clinton starches as a standard of comparison. They increase warp strength to easily withstand abrasion . . . reduce friction . . . smooth fuzzy fibres. Clinton starches give your fabrics proper crispness and body when used in the finishing process too.

Choose Clinton starches. You can depend on them . . . warp after warp after warp.

and remember : technical service in connection with your specific problems is available upon request.

Quality products

FROM THE WORLD'S CORN CENTER

CLINTON

CLINTON FOODS INC.

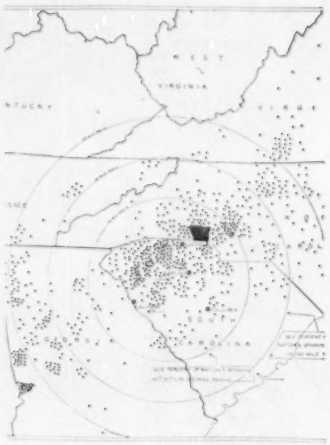
Corn Processing Division

CLINTON IOWA

Shorts and Remnants

St., N.E. Anything we can do for you?

► In case you may not already know it, Clinton, S. C., is the hub of U.S.A. textile activity, all claims of Greenville, Charlotte, and Gastonia to the contrary. Ed Ferguson of Industrial Supply Co. of that fair city sends us two maps showing 63.1% of U. S. spinning activity, 57.5% of U. S. cotton looms, 46% of U. S. total looms in a 200-mile radius of Clinton, S. C. Shown below is his 200-mile map of spinning with Clinton in center of circle.



Liked "Adjust for the Fiber"

"Your staff-prepared article on 'Adjust for the Fiber' in the July issue of TEXTILE INDUSTRIES is very good and is a very unusual type of article. . . . "

HAROLD W. LEITCH
Pacific Mills
Lawrence, Mass.

We're Good at Napping

"I have read with interest the article on essentials for good napping which appeared [July '55 p. 77] . . . "

BOYCE L. ESTES
Clinton Foods, Inc.
Atlanta, Georgia

Fiber Blending for France

"I shall be very glad to receive from you, if possible:

"The guide in a selection of blends for outerwear fabrics entitled 'Properties of blended fabrics' [Mar. '55 p. 102]. . . . "

A. VERMEULEN
Ets Laederich (France)

"The boss figured they might be faster . . ."

Maybe.

But using SEYCO size is a better bet. If you have fewer knots to tie, you won't need to call on the Boy Scouts.

Give Seyco a try. You'll find us Prepared to show you some results.

Warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Seyco Warp Lubricator.

Headquarters for textile chemicals

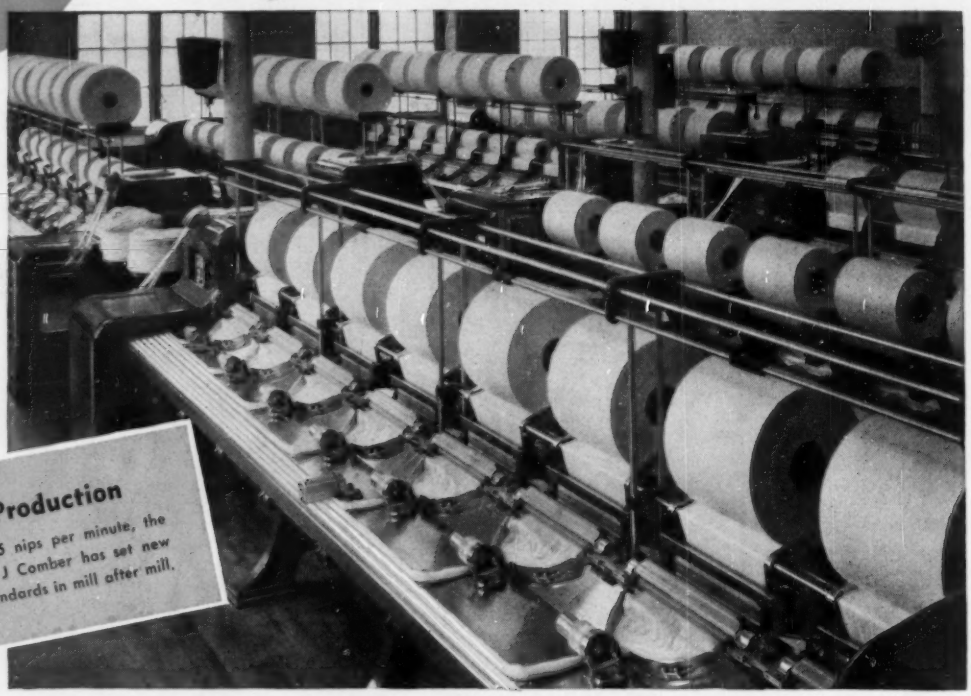
SEYDEL-WOOLLEY & CO.

748 RICE STREET, ATLANTA, GEORGIA

SEYCO

4 Important reasons why leading combed yarn mills name the Whitin MODEL J COMBER

"The finest comber in the world!"



1 High Production

Running at 165 nips per minute, the Whitin Model J Comber has set new production standards in mill after mill.

2 Unsurpassed Quality

The Whitin Model J Comber is unmatched for continuous high quality sliver, superior nep removal, accurate waste control and selective short fiber extraction.

At the Second International Textile Exhibition in Brussels, against world-wide competition, the Whitin Model J Comber again won the acclaim of textile experts from many countries, confirming hundreds of reports by its users that it is "the finest comber in the world"

3 Extremely Low Maintenance Cost

Hundreds of mills report that maintenance costs are negligible. The average is less than $25.00 per year per comber for replacement parts. Settings remain fixed with no need for adjustments between overhauls.

4 Easiest to Operate

Because it has 50% fewer working parts than other combers and is so simple in design, the Whitin Model J Comber is extremely easy to operate.

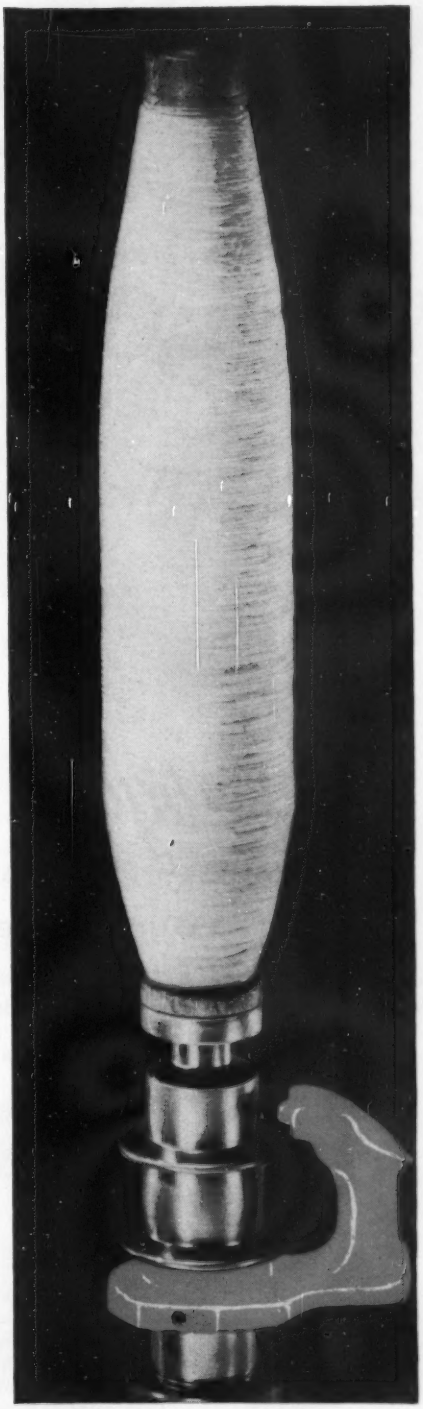
Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

keep spindles spinning clean and true with

Gulfspin



Spindles will stay clean and spin true when you use Gulfspin. This remarkable spindle oil resists sludge formation, holds contaminants in suspension so they do not deposit on spindle parts, and provides effective protection against rust.

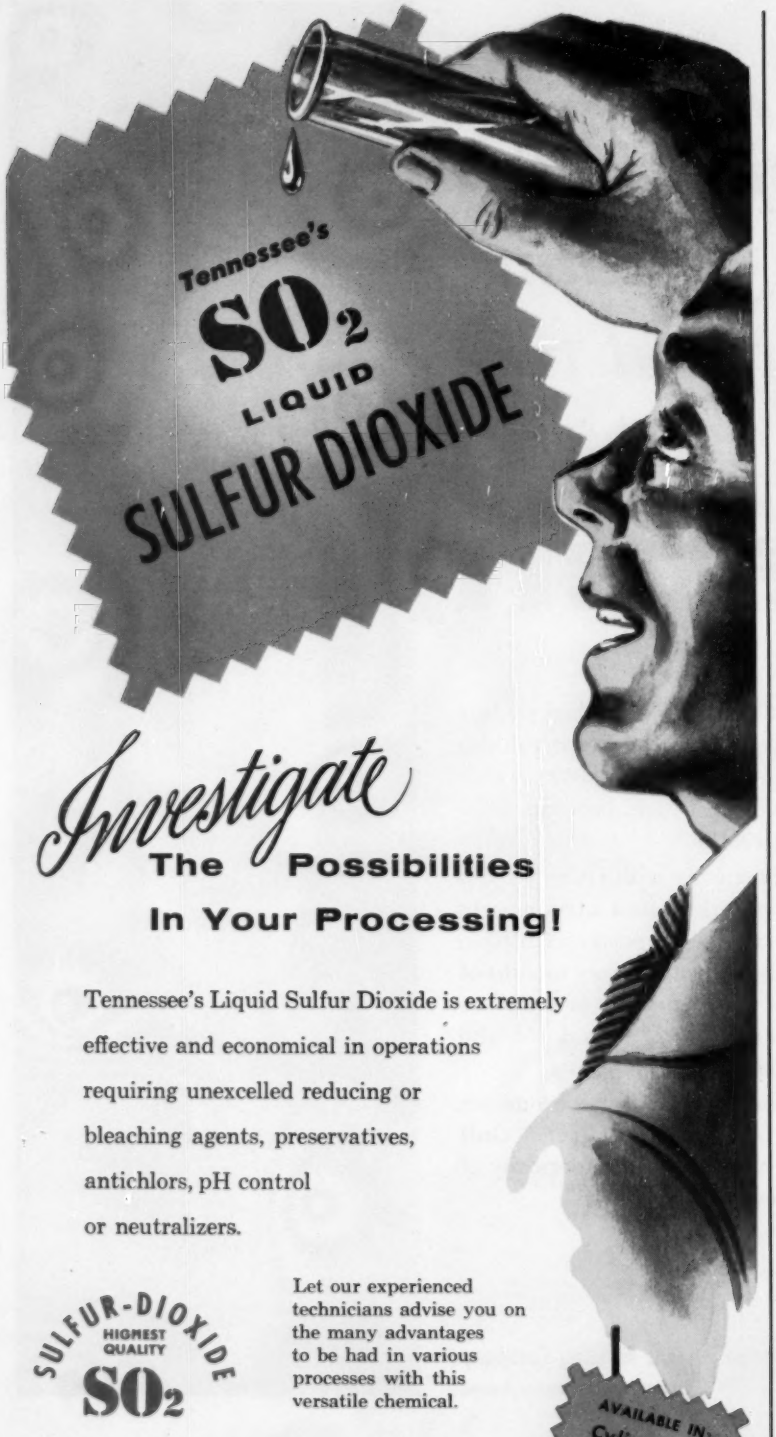
You also reduce power costs with Gulfspin. Ordinary spindle oils often thicken after a few months of service, requiring increased power. Gulfspin shows no increase in viscosity after many months of service. You'll find that these advantages add up to smoother spindle operation, fewer ends down, and rock-bottom maintenance and power costs.

Consult the telephone directory for the number of your nearest Gulf office. Then contact a Gulf Sales Engineer and let him prove the superiority of Gulfspin on your frames.

Gulf Oil Corporation • Gulf Refining Company
Pittsburgh 30, Pennsylvania

GULF

THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS



Investigate

The Possibilities In Your Processing!

Tennessee's Liquid Sulfur Dioxide is extremely effective and economical in operations requiring unexcelled reducing or bleaching agents, preservatives, antichlors, pH control or neutralizers.

SULFUR-DIOXIDE HIGHEST QUALITY SO_2

Let our experienced technicians advise you on the many advantages to be had in various processes with this versatile chemical.

AVAILABLE IN: Cylinders Ton Drums Tank Trucks and Tank Cars

TENNESSEE CORPORATION

617-629 Grant Building, Atlanta, Georgia

Shorts and Remnants

► **Edward S. Atkinson** ("Ted") of Scholler Bros., Inc., has been honored with a room named after him in the new residence hall of Phila. Textile Institute. Here at right, **Fred C. Scholler,** Pres. of the Institute

Foundation, presents plaque to Mr. Atkinson on his 70th birthday.

Best Clearing-House for Ideas

" . . . Realizing that TEXTILE INDUSTRIES is becoming more and more the best clearing-house for ideas in all phases of manufacturing. . . . "

FRED L. STILL
Asst. Treas.
Belle-Vue Mfg. Co.
Hillsboro, North Carolina

"Good Running Work"

"We thought the article on 'The Story of Good Running Work' [Aug. '55] particularly good and would appreciate your sending us 24 additional copies of this article."

PRESTON S. SHEALY
Darlington Mfg. Co.
Darlington, S. C.

► Others thought so, too. We had requests for from 10 to 24 copies from **C. J. Schollenberger,** Dan River Mills, Danville, Va.; **W. B. Munson III,** Denison (Tex.) Cotton Mill Co.; **Lyle Putnam,** Trenton (Tenn.) Mills, Inc. This article was not reprinted. Any mills desiring to do so are hereby given permission to use it in their mill publications or to get the story reproduced by offset from our pages —cost reasonable—just give us credit.

"Macchinario da Sisal"

"Siamo interessati per l'acquesto di un impianto completo per macchinario adatto alla lavorazione del sisal."

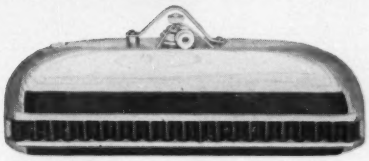
ARETUSI ALDO
Bologna, Italy

► Our editor has a shirt of ramie —wears it, too.

Southern Shuttles

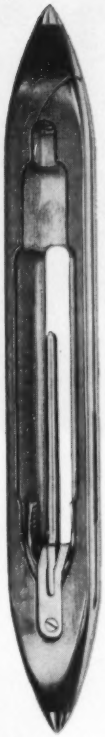
. . The World's Most Complete Line of Quality Shuttles

Super Silk

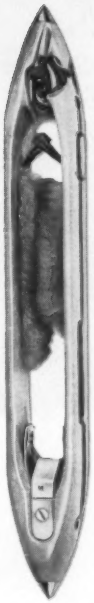


Rack Shuttle

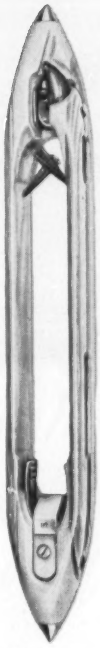
Moulded Cotton



Fibre Covered Plain Shuttle



Durawood



Compreg Duraweld

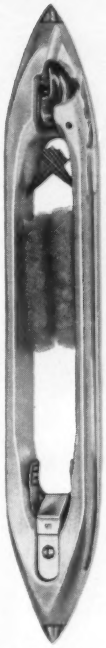
From tip to tip, Southern Shuttles of all types give you *increased efficiency* through *quality control.*

Reduce cost through less maintenance and longer shuttle life.

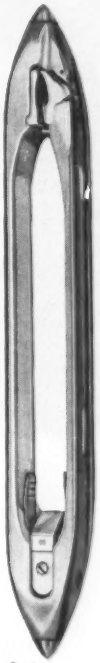
Effect Your Greatest Economy
by
Buying the Right Product
the First Time...

Specify "Southern" for the quality controlled shuttle... a precision product manufactured by the largest single-unit shuttle plant in the world.

Contact your nearest Southern Shuttles Sales Engineer for further interesting information.

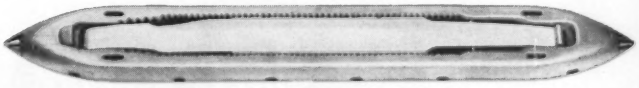


Cotton

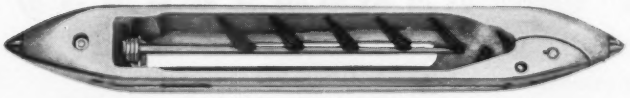


S-6 Loom

Stehide Duraweld



Rug



Duck

TEMPERED

QUALITY Stehedco CONTROL

STEHIDE

SOUTHERN SHUTTLES

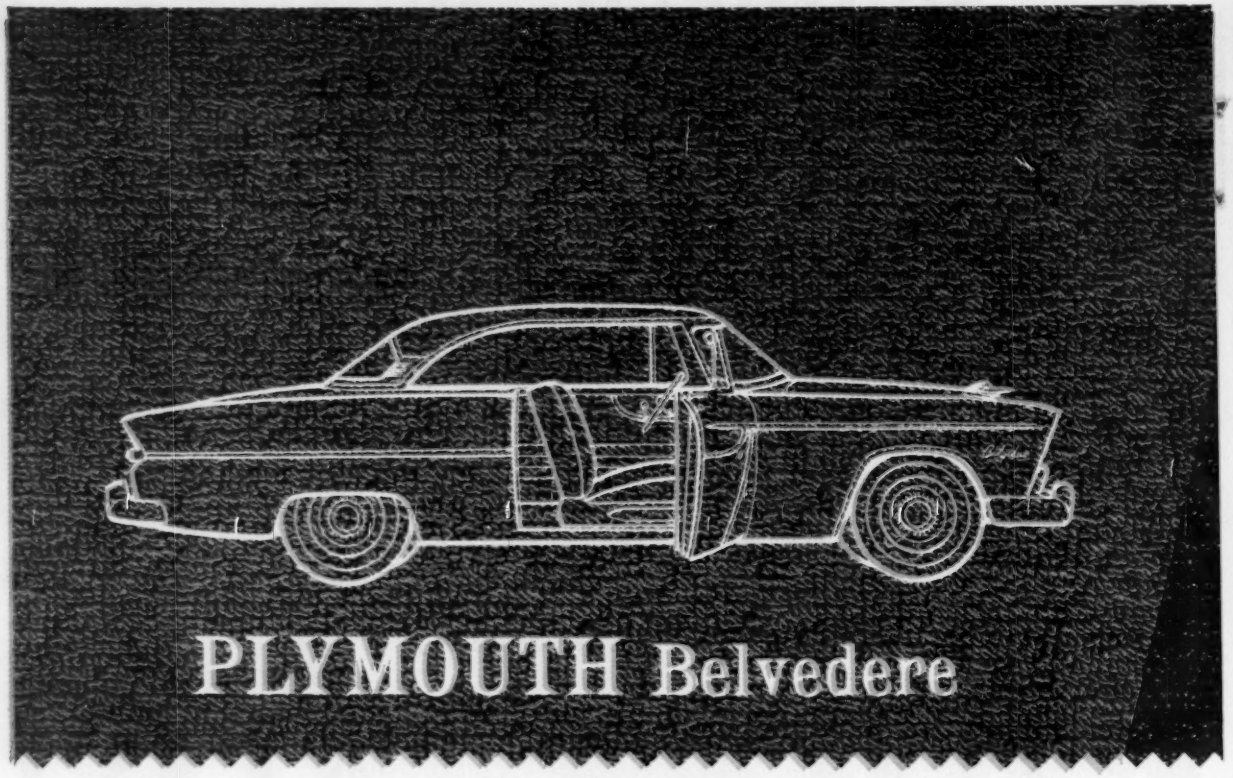
A Division of Steel Heddle Mfg. Co.

Paris, Greenville, S. C.

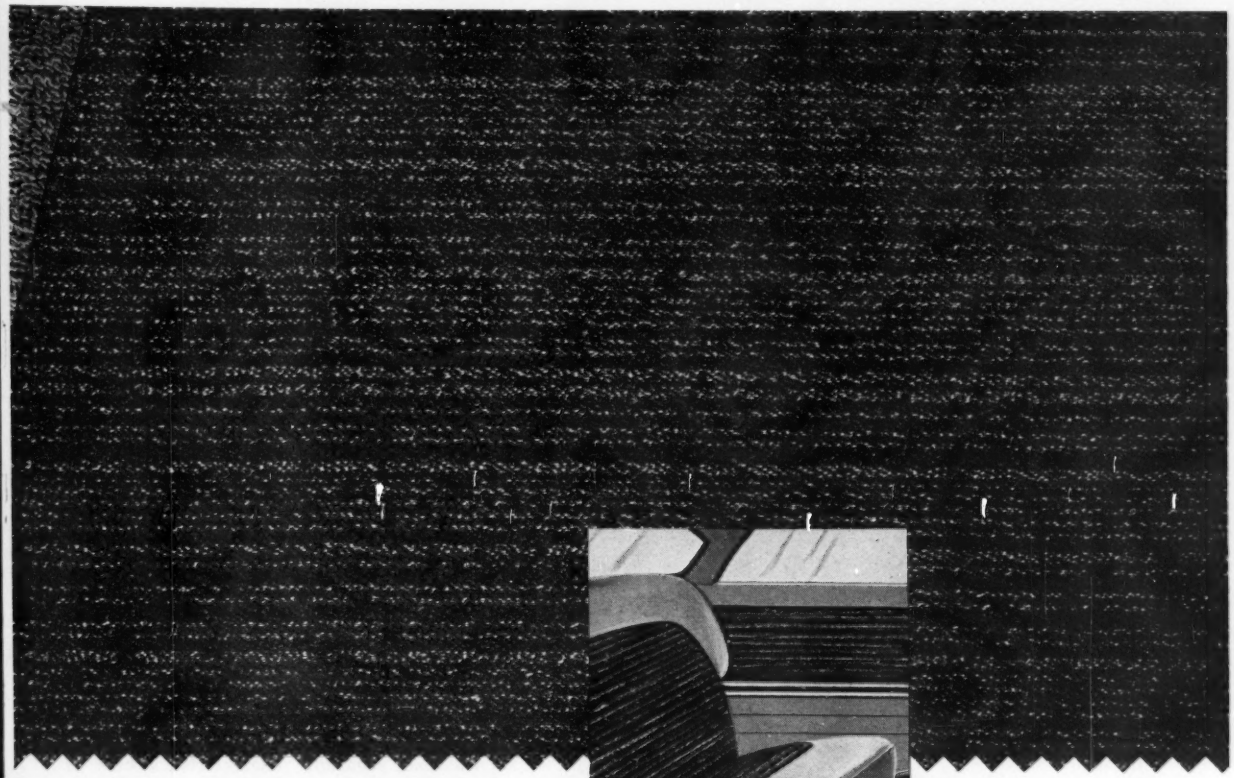
It's "Southern" for Service and Delivery

Tempered Dogwood Shuttles · Duraweld Picker Sticks · Supreme Reeds
Hard Chrome Electro Plating · Castings · Stampings

1-R-17



blends



upholstery *by Swift Mfg. Co.*

carpeting *by Masland and by Mohawk*

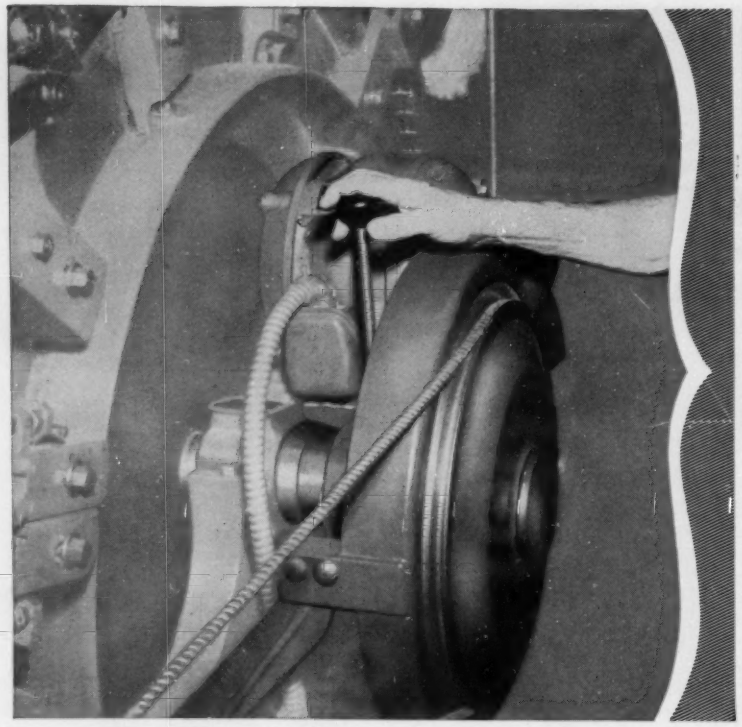
using THE NEW Nylon Staple

At a time of increasing emphasis on car interiors, IRC is proud that the biggest names in the automotive industry are featuring interior trim blended fabrics using the NEW Nylon Staple—introduced less than a year ago! Leading Mills report it is a better nylon staple, for it has seven new and distinctive features capable of producing new and better effects.

- **MORE RESILIENCY** *with less* **CRUSHABILITY** • **GREATER STRENGTH**
- **BRIGHTER LUSTER** • **BETTER CRIMP** • **GREATER RESISTANCE TO ABRASION**
- **LOWER DYE COSTS** • **NEW ECONOMY FOR YOU**

IRC Industrial Rayon Corporation

Sales Offices: 500 Fifth Avenue, New York 36, N. Y. • 627 Guilford Building, Greensboro, N. C.



NO SEPARATE STRIPPING DEVICE OR CHANGES IN PROCEDURE WITH SOUTHERN STATES CARD DRIVES

There is no need to run the risk of costly accidents as a result of changes in operating methods when you install individual card drives in your mill. Southern States has eliminated that problem.

An exclusive feature—a standard-diameter, grooved pulley, built on the main drive—permits stripping in the usual manner. In every case where Southern States Individual Card Drives are used, mills report that stripping is simpler, quicker and safer.

The Southern States Card Drive is priced low enough to fully justify the elimination of old-fashioned lineshafting and belting with their well-known headaches. It is a packaged unit, quickly and easily installed. Mounts directly to card frame. No complicated reduction unit or overhung load on cylinder shaft. Occupies about the same space as a flat-belt drive. Leaves the flats clear and eliminates the danger of springing arches or damage to flats as a result of vibration.

Every month increasing numbers of Southern States Individual Card Drives are going into service. Let our representative show you how they can be made profitable for your mill.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Personal NOTES
ABOUT MEN YOU KNOW

New officers of the South Central Section AATCC: Chairman, **Dr. William F. Luther** of Dixie Mercerizing Co.; vice-chairman, **J. C. Whitt** of Standard-Coosa-Thatcher Co.; secretary, **Ernest V. Helms** of Geigy Chemical Corp.; treasurer, **Franklin E. Cater,** Ray-Ser Dyeing Co. **J. D. Mosheim** of Crystal Springs Bleachery is councillor for the section.

Gary Lehn was recently elected executive vice-president and general manager of both the C. W. Anderson Hosiery Co., Inc., and Dapper Hosiery Mills, Inc., Clinton, S. C. **John W. Finney, Jr.,** was elected vice-president in charge of sales of both organizations.

The program recently announced by the U. S. Department of Agriculture to disseminate information abroad regarding characteristics of United States cotton is headed by **T. L. W. Bailey,** who joined the Foreign Agricultural Service after nine years with the Institute of Textile Technology in Charlottesville, Va.

Recently elected to the position of president and director of Bates Manufacturing Co., Lewiston, Maine, was **Frank C. Mawby** who joined Bates in 1928 as a junior salesman. Mr. Mawby succeeds **Herman D. Ruhm, Jr.,** who a short time ago resigned to become president of Burlington Industries. * * * Newly appointed assistant treasurers of Bates are **Roger B. Gorham** of Auburn, Maine, and **Laurence B. Partridge** of Augusta, Maine.

James E. Britt was recently promoted from the position of general manager to that of vice-president and general manager of Newberry Mills, Inc., Newberry, S. C.

A. H. Thomas, former superintendent of Burlington Mills' Flint No. 2 plant, is now in charge of spinning at three of the company's mills in Mooresville, N. C. Succeeding Mr. Thomas at Flint No. 2 is **J. C. Sproul** who was formerly superintendent of the Modena plant in Gastonia. **J. H. Hattaway,** who had been superintendent at Burlington's Hot Springs, N. C., plant, has replaced Mr. Sproul at

Modena. **J. B. Talbert,** formerly assistant superintendent of the company's Oxford, N. C., plant has been promoted to superintendent at Hot Springs.

Named to succeed J. O. Williams who recently retired as superintendent of Shelby (N. C.) Cotton Mills, was **Guy W. Byrd** of Martinsville, Va.

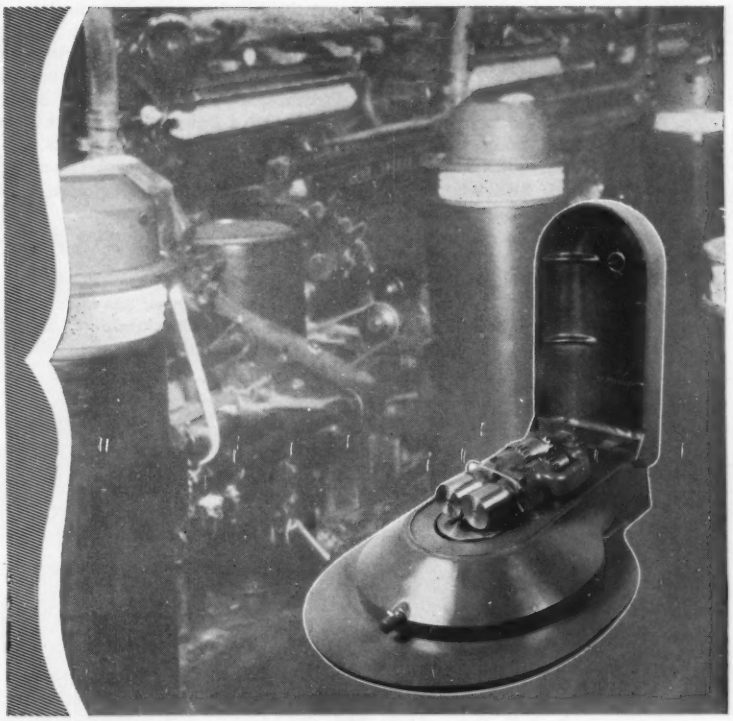
Three textile industry executives have been honored by Clemson (S. C.) College. Honorary doctor of textile industries degrees have been awarded to: **Harold Boeschenstein,** president of Owens-Corning Fiberglas Corp.; **Paolini Gerli,** president of Gerli & Co. and chairman of the board of LaFrance Industries; and **Arthur O. Wellman,** president of Wellman Combing Co. and Nichols & Co.

The appointment of **William H. Conklin** as administrative assistant to the general sales manager of Alexander Smith, Inc., Greenville, Miss., has been announced. Mr. Conklin started his career with Alexander Smith in 1936 in the time study department in the Yonkers, N. Y., plant and had advanced to the position of technical assistant to the president when he received this most recent promotion.

Arthur G. Corkery, formerly vice-president and sales manager of Spun Fibers, worsted spinning division of American & Efird Mills, has joined French Worsted Co. of Woonsocket, R. I., in an administrative and sales capacity. Mr. Corkery's headquarters are at the mill in Woonsocket.

Recently appointed to the position of assistant to the vice-president in charge of production of the Cashmere Corp. of America was **Richard Dreher** who came to Cashmere from the chemical division of B. F. Goodrich Co.

News from Fieldcrest Mills, Inc.: **Jack R. Baker** is the newly appointed assistant superintendent of the finishing mill, having joined Fieldcrest in 1950. J. W. Arnall, formerly assistant superintendent of the finishing mill, now has the additional responsibility of the bleachery for second and third shift operations. * * * Promotion of **Stiles R. Fifield** from the position of director of raw materials purchasing to vice-president of Fieldcrest Mills, Inc., in charge of raw materials purchasing has been announced. * * * **D. A. Purcell,** formerly superintendent of the blanket mill, is assistant



SOUTHERN STATES COILER HEADS MAKE CONVERSION TO LARGER CANS A SELF-PAYING PROPOSITION

Every mill man with an eye for ways to cut card room operating costs knows the advantages of larger cans. But what some don't realize is that Southern States conversions are so economical that they pay for themselves—a fact proved by case histories of mills throughout the country.

The Southern States Universal Coiler Head, illustrated above, is designed for either 14- or 15-inch cans. It is adaptable to any make of coiler. Using this head, intermediate gearing, coiler base and *your existing stand,* an inexpensive installation can be made in your mill.

Then you can enjoy all of these advantages: simplified oiling; ease of maintenance; smaller parts inventory; more efficient handling; lower operating costs; and improved quality. The photograph shows the simplified design of this head. Notice the streamlined cover and bonnet. Cut tooth gears and oilite bearings are used throughout. It is precision built for years of satisfactory service.

Get full facts from your Southern States representative, or send your request direct to the home office for a quick reply.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Personal NOTES ABOUT MEN YOU KNOW

manager of the towel mill, Fieldale, Va. **William R. Kiser,** formerly supervisor of methods and standards, is now director of standards, having replaced **Wesley H. Suit** who resigned to accept a position in another company. **C. A. Davis,** formerly foreman of weaving, is now superintendent of the blanket mill, replacing Mr. Purcell. **Daily P. Gambill,** formerly foreman of the blanket inspecting department, has been promoted to foreman of the blanket weave room. **John M. Harkey,** formerly assistant foreman of the blanket carding department on the second shift, has been promoted to foreman of the inspection department. * * * **Edward J. Hoechst** is now director of industrial relations. * * * **G. C. Swinney,** assistant foreman in the wool spinning department at the blanket mill, was recently elected president of North Carolina Checker Association.

A. Louis Oresman has been elected a director and **Benjamin W. Streifler** has been elected a vice-president of Julius Kayser & Co. Mr. Oresman is president of Catalina, Inc., a wholly-owned subsidiary of Kayser. Mr. Streifler is president of Nazareth Mills, Inc., a division of Julius Kayser, and general merchandise manager of Kayser.

A new position, designated mill designer and technical superintendent, has been created at Charlottesville (Va.) Woolen Mills. Serving in this capacity is **Paul A. Koppe** who was formerly a designer and superintendent of Seymour (Ind.) Woolen Mills.

Now serving as chief of the purchasing division of the Philadelphia (Pa.) Quartermaster Depot is **Colonel Alfred M. Koster** who returned to this country recently from an assignment as head of the Far East Command Exchange Service. In his new position, Col. Koster will be responsible for purchasing textiles, clothing, footwear, etc.

Recently appointed women's counselor of the Chatham Manufacturing Co., Elkin, N. C., was **Mrs. Gladys Lane** who joined the company in 1938.

Now serving in Burlington Industries' New York office in an executive capacity is **Louis F. Laun** who until recently was in charge of Bates Manufacturing Co.'s industrial and public relations.

Robert J. McCann has been named director of manufacturing for James Lees & Sons Co. Vice-president **Elias G. Hawkins** now has the responsibility for the functions of inventory planning, production scheduling, warehousing, and customer service. The industrial and public relations departments counsel with him on matters pertaining to those areas. **Edward K. Crothers** is now chief industrial engineer and in addition, for the present, he is continuing to perform the duties of personnel manager of the Blue Ridge Plant at Glasgow, Va.

Paul E. Lynch, formerly assistant, is now purchasing agent of Pacific Mills, Lawrence, Mass. He succeeds the late Fred Johnson.

Merrill R. May has been appointed research manager of the Glass Fabrics Finishing Corp. in Cedar Grove, N. J., a wholly-owned subsidiary of Hess, Goldsmith & Co., Inc. His primary task will be the development of new finishes for decorative and industrial glass fabrics. In addition, he

NON-FLUID OIL

TRADE MARK REGISTERED

STAYS IN BEARINGS!

Worn bearings throw the Cylinder and Top Flats out of adjustment and uneven sliver is the result. Dripping, spattering liquid oil is the wasteful trouble-causer.

NON-FLUID OIL *stays* where applied—lubricating on the job—all the way, until entirely consumed. Mills save on oil—on application—on machinery—on damaged goods —with NON-FLUID OIL.

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so good

for the eyes

so kind

to the feet . . .

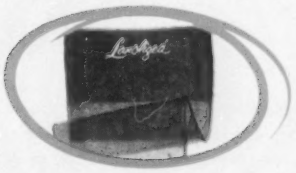
. . . . . *LANOLIZED* nylons . . . more beautiful, more alluring . . . soft as silk, smooth as velvet: the maximum in beauty, the ultimate in comfort!

OF COURSE . . . THEY'RE

Lanolized®

THE NEW MEMBER OF THE DuraBeau FAMILY

THE PROCESS THAT TREATS NYLON STOCKINGS WITH LANOLIN



SCHOLLER BROS., INC.

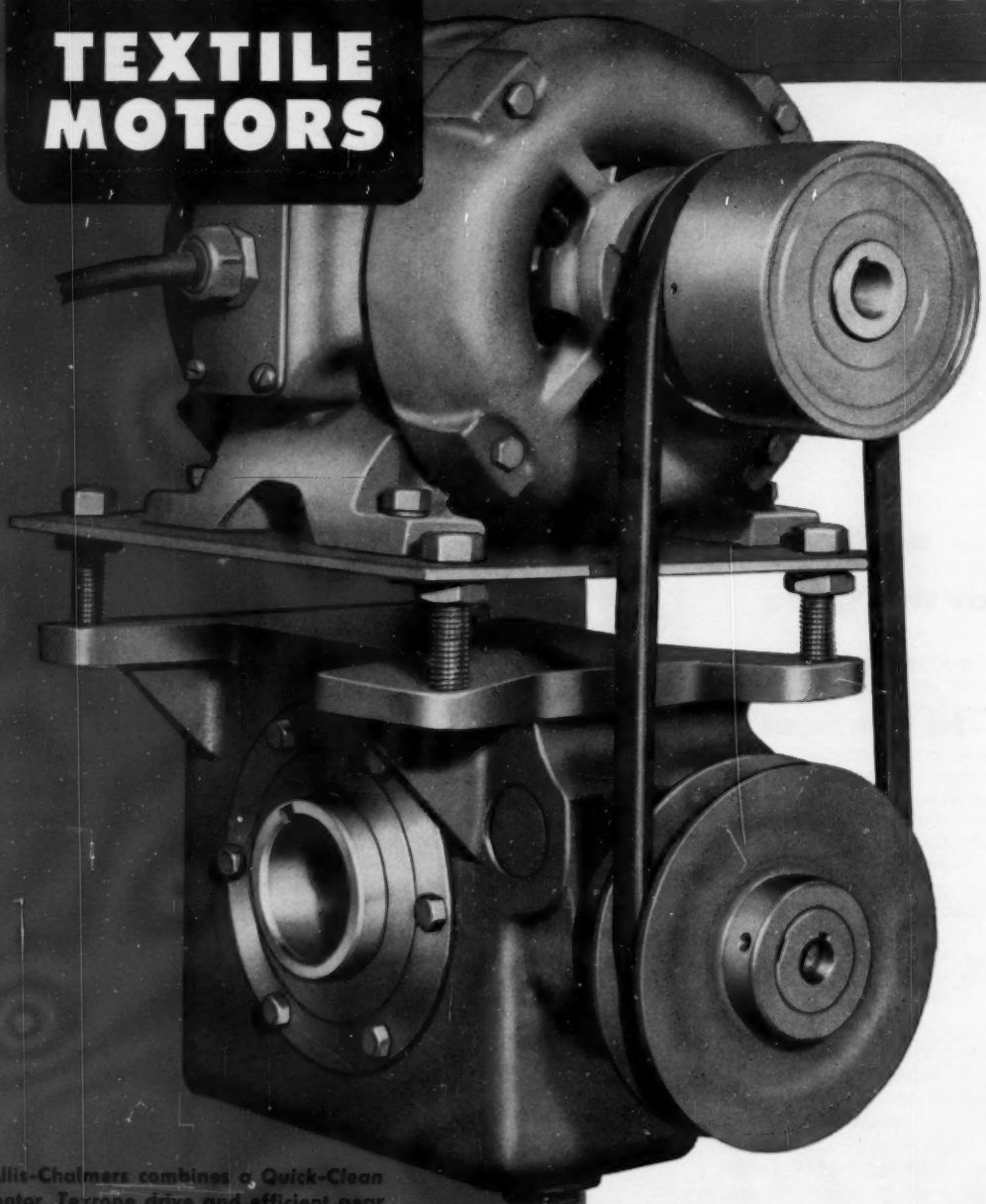
Authorized Manufacturers and Distributors of LANOLIZED . . . The Miracle Finish. Collins & Westmoreland Sts., Philadelphia 34, Pa. IN CANADA: Scholler Bros., Ltd., St. Catharines, Ontario

PIONEERS IN TEXTILE FINISHES SINCE 1907

MAKE YOUR CARD ....Cleaner

ALLIS-CHALMERS

TEXTILE MOTORS



Allis-Chalmers combines a Quick-Clean motor, Texrope drive and efficient gear reducer to make a compact, reasonably priced power-package for cards.

ALLIS-

ROOM more Efficient and Safer

INDIVIDUAL machine control permits greater flexibility and more efficient machine usage. There is no large, unguarded belt to throw dirt and grease into the material or catch hands or clothing.

There's no need to move cards to install this drive. Unit requires practically same floor space as tight-and-loose pulley drive. It is mounted directly on the card shaft — independent of the card arch — with torque arm to keep gear box from rotating. There's no strain on card arch to cause vibration or distortion of air gap between flats and main cylinder. Constant speed results in higher quality.

Cuts Maintenance, Too!

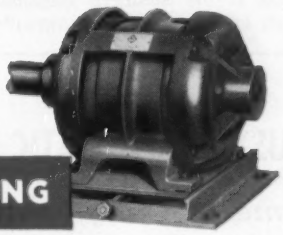
No heavy, expensive belts to replace . . . no dirt-catching belt dressing. In addition, the drive is practically vibrationless, increasing life of card and making it easier to keep in adjustment.

Allis-Chalmers textile specialists are located in District Offices in textile areas throughout the country to help you with your drive problems. For more information on Allis-Chalmers Textile Drives, call your nearby A-C District Office, or write Allis-Chalmers, Milwaukee 1, Wisconsin, for these bulletins:

Handy Guide to Motor Selection	51B6052
Quick-Clean Textile Motors	51B6055
Individual Card Drives	51B7867
Loom Motors	51B7111
Roving Frame Motors	51B7896
Handy Guide to *Texrope* Drives	20B6051

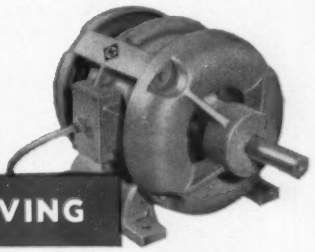
Quick-Clean and *Texrope* are Allis-Chalmers trademarks.

OTHER ALLIS-CHALMERS TEXTILE DRIVES



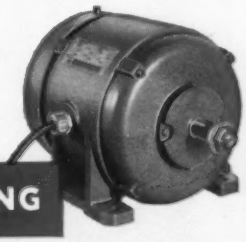
SPINNING

Wide open air passages and powerful fans of *Quick-Clean* design sweep dirt and lint right through and OUT of these motors. Sealed, double-width bearings.



ROVING

Quick-Clean motor with special slow acceleration characteristics. Takes almost three times as long as standard motor to reach operating speed. No special control required.



WEAVING

Allis-Chalmers loom motor has oversize rotor, stator and bearings. Rotor diameter is as great as possible to provide maximum inherent flywheel effect, while slip has been regulated to produce minimum speed variation. External flywheel can be furnished for looms requiring still greater Wk^2.

CHALMERS

A-4622

Personal NOTES ABOUT MEN YOU KNOW

will be engaged in research into new product possibilities for woven glass fabrics and the improvement of current processes at the Cedar Grove plant.

Marshall E. Miller has been employed by Agricultural Marketing Service as an agricultural economist stationed at the Southern Regional Research Laboratory of the Agricultural Research Service at New Orleans, La.

William Nunn, former make-up editor of the Memphis Press-Scimitar, has joined the public relations and sales promotion staff of the National Cotton Council in Memphis, Tenn.

Lawrence F. Maloney, Jr., former men's editor of Harper's Bazaar magazine, has been named to the staff of the men's wear promotion department of The Wool Bureau, Inc. He will assist in the development of nation-wide retail promotions coordinated with the current consumer advertising campaign for wool.

Roy M. Fingar, formerly manager of Fonda (N. Y.) Glove Lining Co., and before that with the Oneita Knitting Mills of Utica, N. Y., is now superintendent of the knitting division of Draper Bros. Co., Canton, Mass.

F. Springer Foster, formerly product development supervisor of Hillside Plant of Callaway Mills Co., LaGrange, Ga., has been transferred to the Valway Plant in the same capacity.

John F. Fowler has resigned as vice-president and director of E-Z Mills, Inc., of Cartersville, Ga., and of A. S. Haight & Co. of New York, and has been named to the newly created post of director of research and new products development of P. H. Hanes Knitting Co. in Winston-Salem, N. C.

Succeeding **Lyman B. Frieze,** who has retired, as president of Duplan Corp. is **George Friedlander** who has been a vice-president of the concern since 1945.

Edwin H. Bost has retired as manager of operations of Erwin (N. C.) Mills, Inc. Promoted to succeed Mr. Bost was **W. H. Miley,** assistant manager. General superintendent **J. K. Bruton** was promoted to assistant manager. * * * **George W. Ray, Jr.,** has joined the Erwin Mills, Inc., Plant No. 7, Neuse, N. C., as overseer of spinning and preparation. Mr. Ray formerly held a similar position at the Aragon Baldwin Plant of J. P. Stevens & Co., Inc., in Rock Hill, S. C.

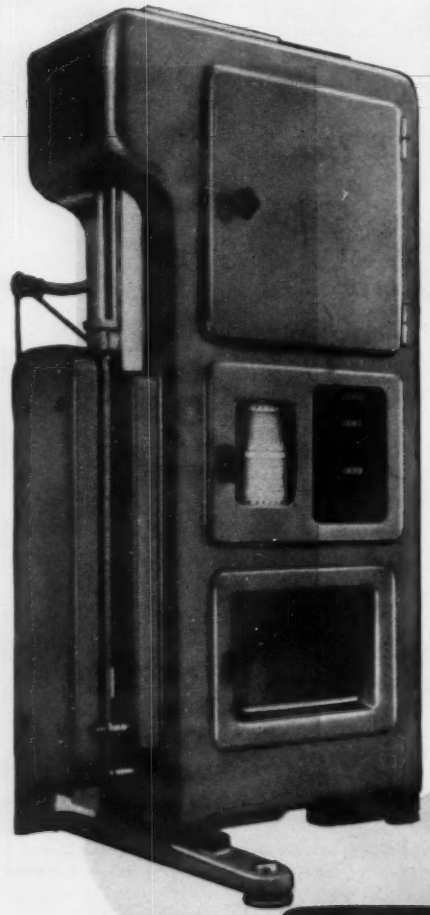
Kenneth J. Maine is superintendent of the newly-established rubber covering division of Charbert Inc., Westerly, R. I. From its start three years ago until recently Charbert specialized in the weaving of broad elastic fabrics.

New officers of Greenwood Mills, Inc., Greenwood, S. C., are: chairman of the board, **J. B. Harris, Sr.**— Mr. Harris has been connected with the company since 1912 and served as vice-president for 31 years; president, **J. C. Self, Jr.,** formerly treasurer; treasurer, **L. B. Adams** who has been an employee of Greenwood for 32 years; secretary, **H. W. Brinson,** formerly assistant secretary.

(Continued on page 38)

USTER AUTOMATIC YARN STRENGTH TESTER

makes single strand tests practical



NOW AT 10% of FORMER COST

THE NEW USTER AUTOMATIC YARN STRENGTH TESTER

- Is completely automatic in operation
- Relieves operator for other duties
- Records periodic breaking cycles, elongation, frequency distribution
- Requires no reeling
- Reduces waste for cotton, wool, filament, staple fiber yarns
- Up to 2,000 tests per day

Write to

USTER CORPORATION
2516 Wilkinson Blvd.
CHARLOTTE, N. C.

and get the full story

TESTING EQUIPMENT — USTER — PREPARATION MACHINERY

Standing behind

your Du Pont salesman

The salesman from Du Pont doesn't work alone. There's a whole staff of experts behind him ready to be at his service—and *yours*—at any time. Your salesman, a trained technician himself, is only one part of Du Pont's *unmatched* technical-service group.

Directly behind the SALESMAN—who is always glad to give you on-the-spot assistance — are the Du Pont DEMONSTRATORS, a group of all-around textile men. Each demonstrator is a highly trained technician with particularly broad experience in the dyeing and finishing field. He'll help you on any problem you might have, simple or complex, by working with you in your plant.

In addition, every DEMONSTRATOR has at his disposal the facilities of the DISTRICT SERVICE LABORATORY, backed up by Du Pont's main CUSTOMER SERVICE LABORATORY.

At the end of this chain of experts in the Du Pont RESEARCH LABORATORY, skilled chemists are constantly working toward new and improved dyes, processes and methods — all to bring you better dyeing and finishing.

The next time you talk to your Du Pont salesman, remember the well-trained staff behind him. They're all *at your service*. Contact: E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Del.

Du Pont Dyes

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. . . *THROUGH CHEMISTRY*

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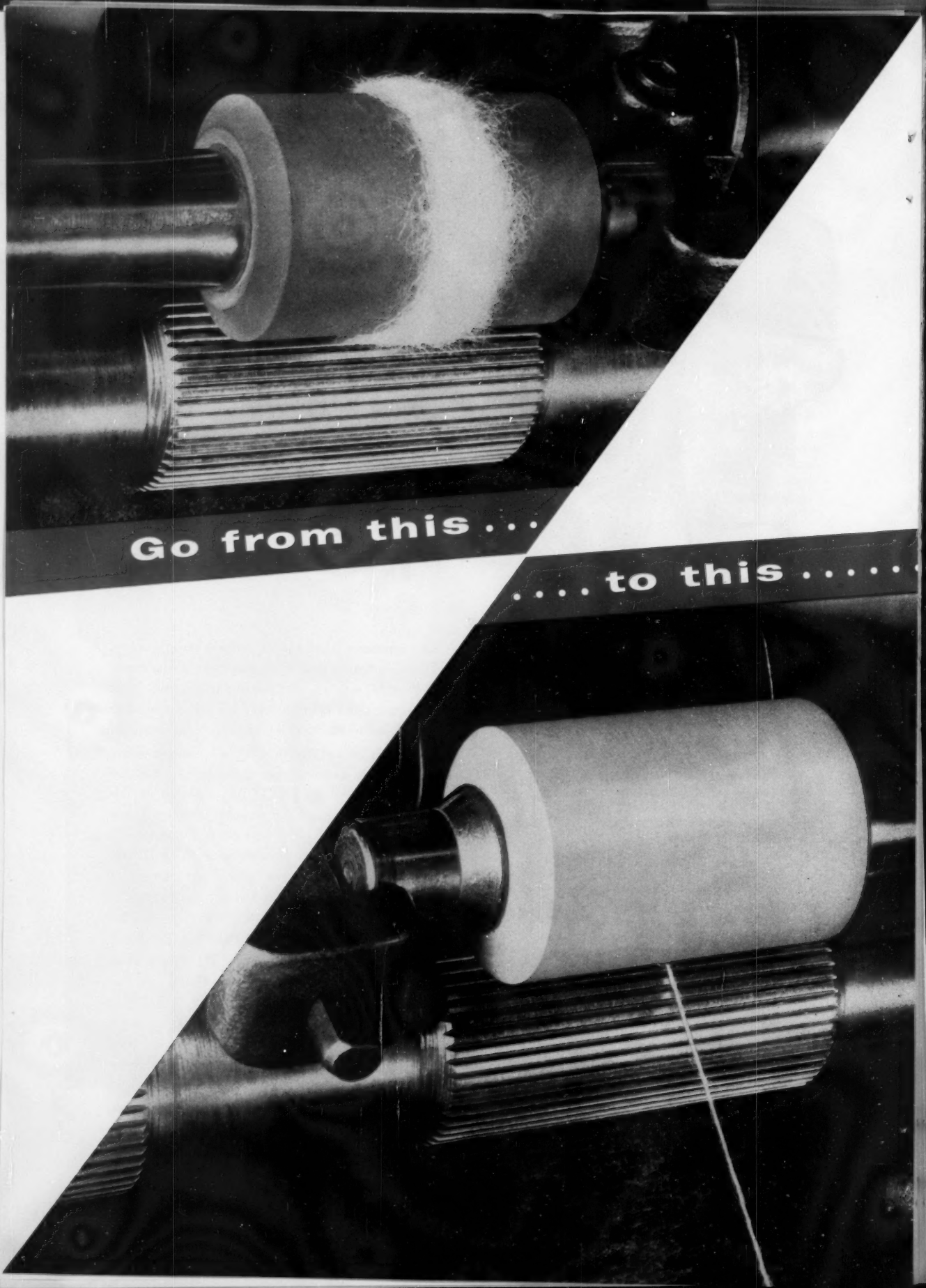
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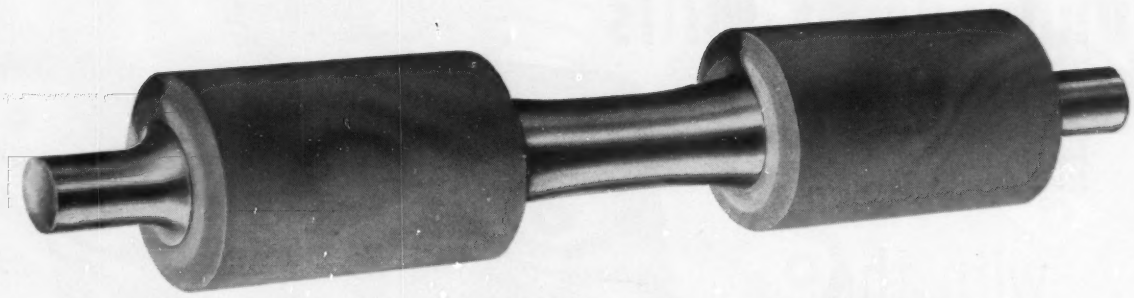


. . . . . with J-490 Cots

ARMSTRONG J-490 ACCOTEX COTS MINIMIZE LAP-UPS—WITH ANY TYPE OF FIBER

Whether you're spinning natural or synthetic fibers, Armstrong J-490 Accotex® Cots help prevent lapping . . . and turn out uniform yarn, year after year. The reason for this is the way J-490 Cots are made. Here's a look at this exclusive Armstrong process:

Electrolytes added to neutralize attraction. J-490 Cots are made of a patented synthetic rubber material that eliminates the basic cause of lapping—electrical attraction between cot and fiber. Electrolytes built into the J-490 compound actually tend to repel broken ends.

Designed for smoothness. The J-490 compound is specially made to provide a smooth drafting surface. Because this compound contains no rough fillers, J-490 Cots won't pull short fibers from stock and cause excessive end breakage.

Long-wearing synthetic rubber. All that's needed to keep durable J-490 Cots running like new for years is an occasional re-buffing. Your Armstrong representative will be glad to help you set up a test side of these cots. Ask him about it on his *next* call. Send for booklet, "Armstrong Textile Roll Coverings and Mill Supplies." Write to Armstrong Cork Company, Industrial Division, 6510 Ivy Street, Lancaster, Pennsylvania.

If you have trouble with eyebrowing in spinning, try the Armstrong NO-742-S Cot. Its "constant-friction" surface packs waste tightly back under clearers, stops eyebrows from forming. With normal picking schedules, you'll seldom see an eyebrow on frames equipped with NO-742-S Cots.

Armstrong ACCOTEX COTS

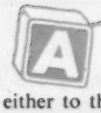
. . . used wherever performance counts

Hundreds of Mills

Have Found with the

STROBOTAC®

it's Simple as



Turn this switch either to the "LOW" (600 to 3700 rpm) or "HIGH" (2500 to 14500 rpm) position, depending upon the speed of the machine or part you want to look at.

Point the stroboscopic flashing light at the machine.

Slowly rotate the speed control knob "C" which is attached to a drum-dial direct-reading in rpm. As this knob is turned, the machine being observed will suddenly appear to stand still. At this point the speed in rpm is indicated on the dial between 60 and 14,4500 rpm; indirectly up to 100,000 rpm!

A slight adjustment of the knob will make the equipment appear to move in s-l-o-w motion over any range from 300-400 rpm to 100,000 rpm . . . permitting exact observation of the performance of the equipment while it is running at its normal speed.

The STROBOTAC is portable, light weight, operated from 115-volt 60-cycle power lines and can be used by anyone. It is priced at $150.00 complete.

To Make SPEED CHECKS and SLOW MOTION STUDIES

- ★ Spindles for **COTTON RAYON WORSTED SILK**
- ★ Rayon Buckets
- ★ Ring Travelers

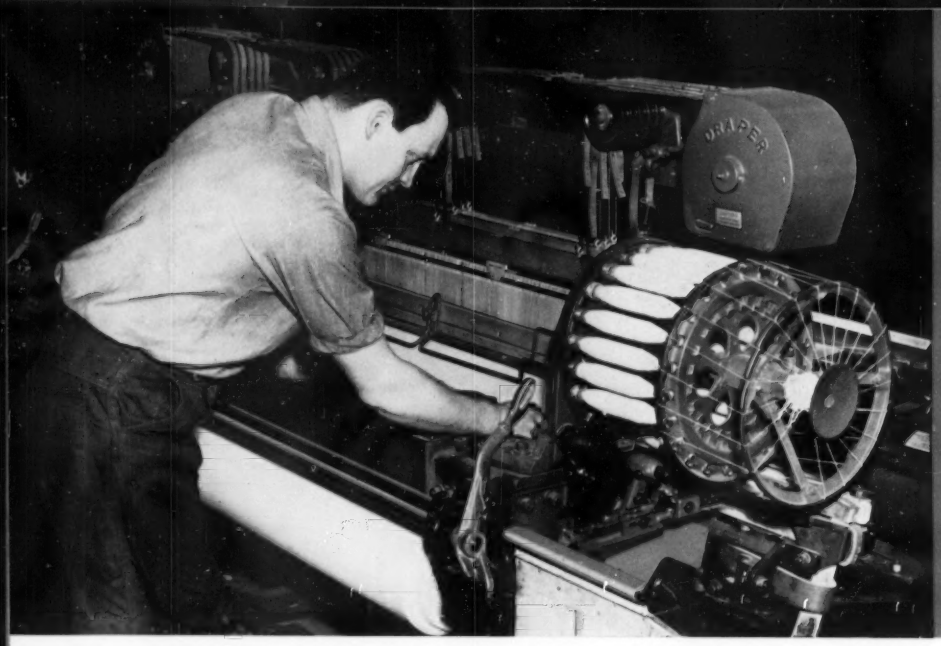
Hundreds of textile mills have cut down rejects, simplified maintenance and improved quality with the STROBOTAC and other G-R Stroboscopic equipment. **For Complete Data Write for the STROBOSCOPE Bulletin**

STROBOTAC®

Manufactured Exclusively by . . .

GENERAL RADIO Company 275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.

WE SELL DIRECT
Prices are net, FOB Cambridge or West Concord, Mass.



No. 5 of a Series

DRAPER LOOM FIXING

Aligning Lays

Regular inspection of Lay alignment is necessary for best loom operation, reduction of cloth seconds, and increased shuttle life.

Lays may get out of alignment when looms are moved, or from wear resulting from running for a long period of time. If Rocker Shaft Boxes become worn, the Lay drops, and lay motion parts are thrown out of alignment.

It is good practice to check Lay assembly, Crank Arms and Battery settings at each warp-out.

1. Worn Rocker Shafts and Rocker Shaft Boxes should be replaced with new parts of the latest construction.

Whenever Rocker Shaft Boxes are removed, new holes must be drilled and new dowel pins used in reassembling.

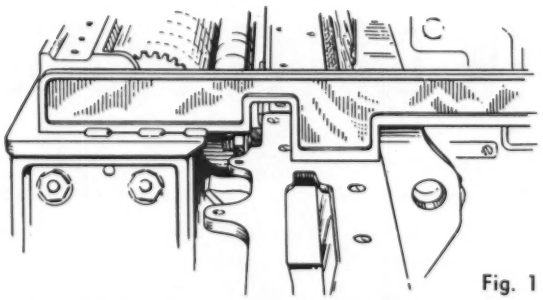


Fig. 1

2. The Lay must be set at proper height in relation to the loom frame. This is accomplished by using a Lay Height Gauge and gauging at both ends of the Lay. This gauge contacts the top surfaces of the Breast Beam, Lay, and middle horn of the Loomside with the Lay at extreme forward position (See Fig. 1).

3. Check centering of Lay, placing Lay Centering Gauge on the Lay so that it lines with the center lines which are marked on both Lay and Breast Beam (See Fig. 2).

If Lay is off center, loosen Sword parts so that Lay may be moved to right or left to bring center marks on Lay and Breast Beam in line.

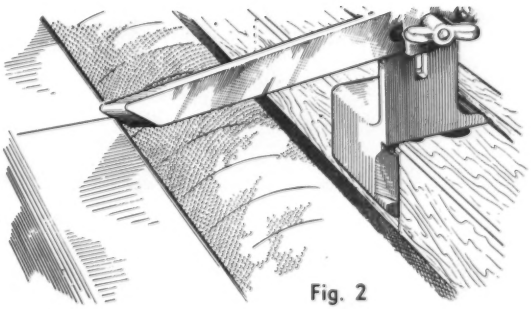


Fig. 2

Other steps in a complete Lay alignment are:

4. Check Lay assembly for twist or "wind" using a long precision-ground straightedge and machined angle-iron.

5. If Shuttle Race is replaced, check for proper location of back edge of Shuttle Race from Reed using long straightedge and thickness gauges.

6. Align Reed using long straightedge and reed square.

7. Adjust Back Box Plates using both a long and short straightedge. For complete Aligning Lay instructions, consult the new Draper Setting Instruction Booklet No. 559.

The above is a condensed version of the necessary procedure for Aligning Lays. Kindly fill out coupon below for complete Setting Instruction.

DRAPER CORPORATION

Advertising Department (T15)
Hopedale, Massachusetts

Please send complete Setting Instruction No. 559 "Aligning Lays."

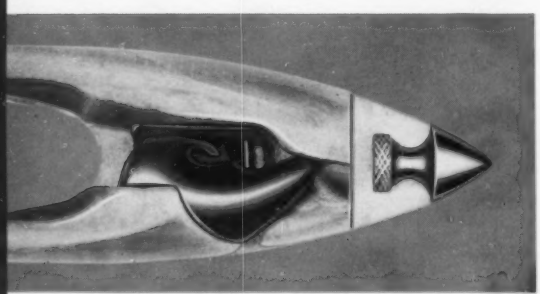
Name_____

Position_____

Company_____

Address_____

INCREASE SHUTTLE LIFE 2 TO 3 TIMES WITH "TRU-MOLD" . . . THE NEW DRAPER SHUTTLE



Sectional view of Shuttle Spur molded in fixed position

This is a fact confirmed by extensive mill trials.
Shuttle failure is reduced in the Draper "Tru-Mold" Shuttle because:

- The material used has the ability to completely resist atmospheric conditions in the weave room.
- Spurs are molded in the shuttle for permanent alignment.
- Shuttle eyes and springs remain in correct position due to the material used.

Currently available in three basic sizes, the new Draper "Tru-Mold" Shuttle offers greater shuttle economy and improved loom operation.

DRAPER CORPORATION

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ATLANTA, GA.
GREENSBORO, N. C.
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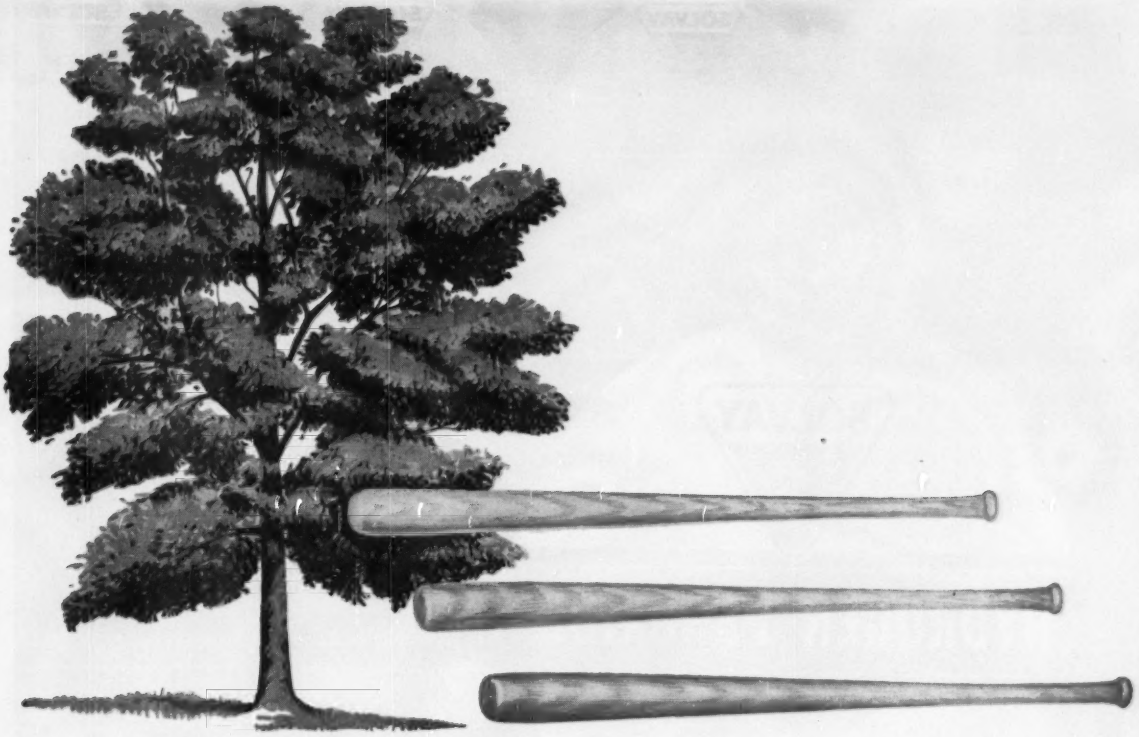
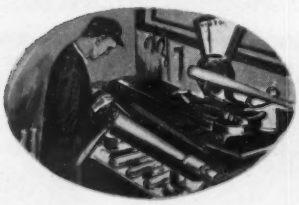




Home runs start here

HOME RUNS START . . . *where?*

In the ball-park? More likely in the forest, for the finest bats need tough, straight-grained ash. Add time for aging. Skill in shaping. *Result:* a bat with a game-winning "finish."

In bleaching and dyeing operations also, fine finishes don't "just happen." They, too, take planning . . . take skill . . . take a de-sizing agent you can rely upon . . . take *Diastafor.*

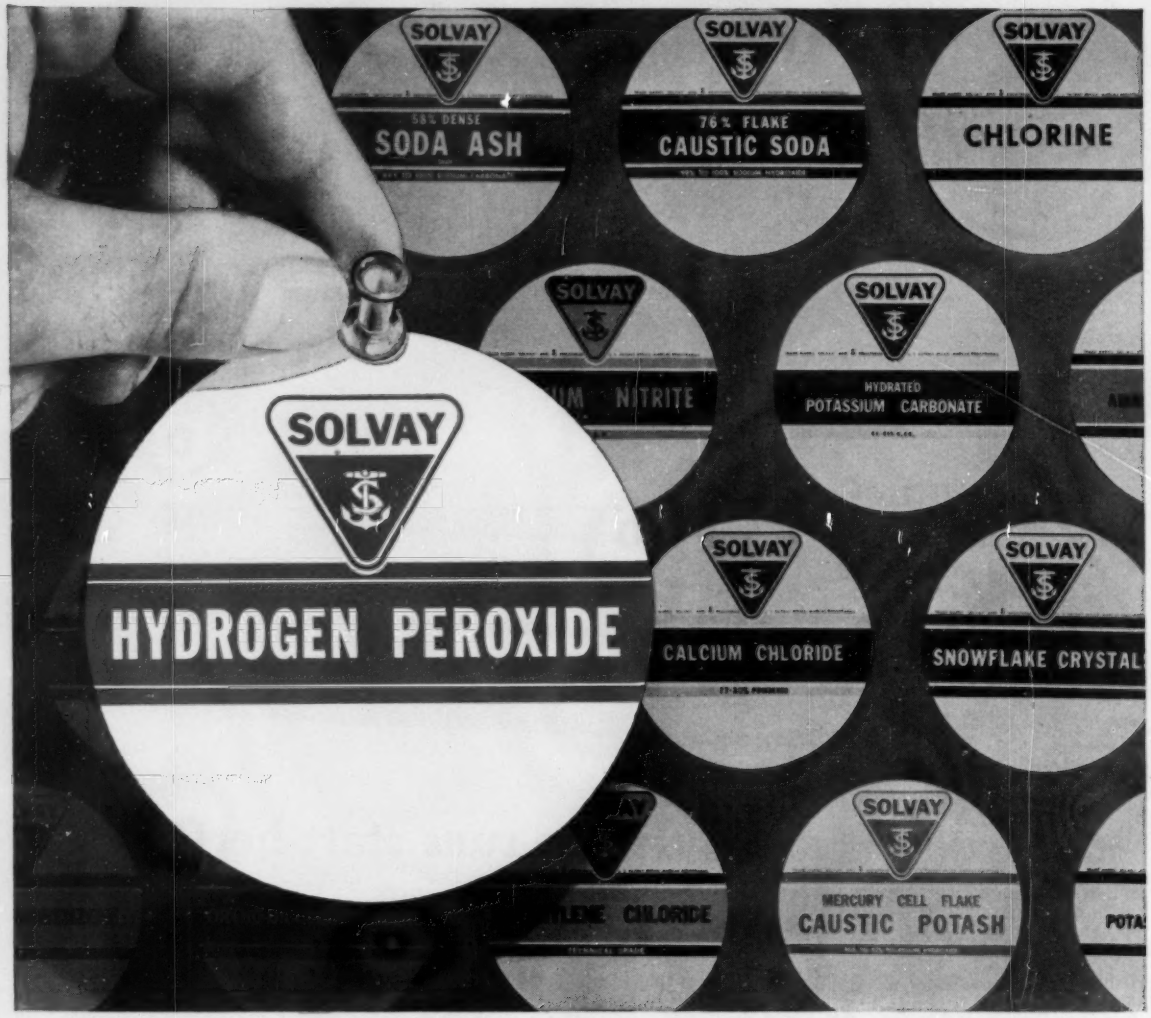
Diastafor de-sizing agent is worth cheering about. No matter what your working conditions—with various lots . . . with variations in water and sizing formulas . . . with cottons, rayons or mixed goods—you will find Diastafor a champion every time.

For Diastafor *works.* It works in an unusually wide range of temperatures and pH, a range sure to satisfy your every enzyme de-sizing requirement. It works in either the continuous or batch process. It works with ease, speed and economy. Remember: *it has worked as a winner for over 44 years!*

Diastafor is available in 3 types: L, L_2 and D. For further information about these, or for any other questions you may have, please write us. Standard Brands Incorporated, *Diastafor Department,* 595 Madison Avenue, New York 22, N. Y.

DIASTAFOR

A TRADE MARK OF STANDARD BRANDS INCORPORATED



A NEW Solvay Product

Solvay Hydrogen Peroxide, the latest addition to Solvay's line of alkalies and industrial chemicals, is being produced in a new plant at Syracuse, New York. This new plant, which represents the latest advances in chemical engineering, is designed to assure hydrogen peroxide users a product of highest quality–Solvay quality.

Solvay Hydrogen Peroxide will be produced in both 35% and 50% grades, and will be shipped in both drums and tank cars. It will be available in straight or mixed carloads or truckloads, as well as in less carload quantities. We invite your inquiries about prices and general information.

SOLVAY

Potassium Carbonate • Calcium Chloride • Sodium Bicarbonate
Soda Ash • Hydrogen Peroxide • Snowflake® Crystals • Chloroform
Ammonium Bicarbonate • Cleaning Compounds • Caustic Potash
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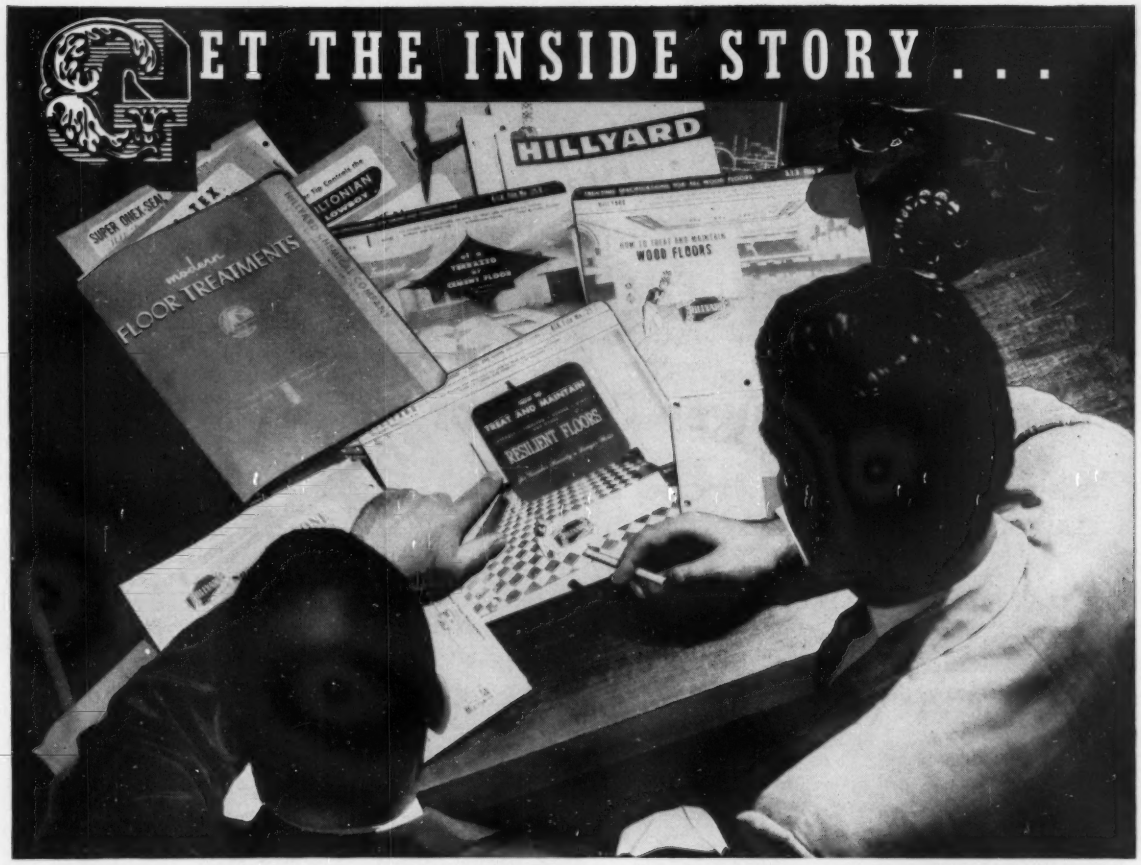

and get the best Floor Treatment and Maintenance Program that's within your budget

—how to bring your floors into peak condition and keep them that way. Finest quality Hillyard Products cut labor time—and assure actual savings of maintenance dollars!

A Hillyard Floor Survey is made up specially for you and your floor problems. It takes into account the type of flooring material, the floor's location, the kind and amount of floor traffic, and your standards for appearance —sanitation—safety.

Ask for a Survey on your floors, by your nearby Hillyard "Maintaineer".® This service is without charge or obligation--a Nation-wide staff of Hillyard "Maintaineers" (trained floor consultants) "on your staff not your payroll." There's a "Maintaineer" near you to help you plan the most efficient, economical floor treatment and maintenance plan for YOUR floors.

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Please have a Hillyard Maintainer call to make a Survey on my floors. (No obligation)

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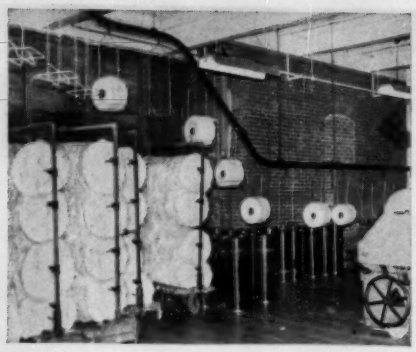
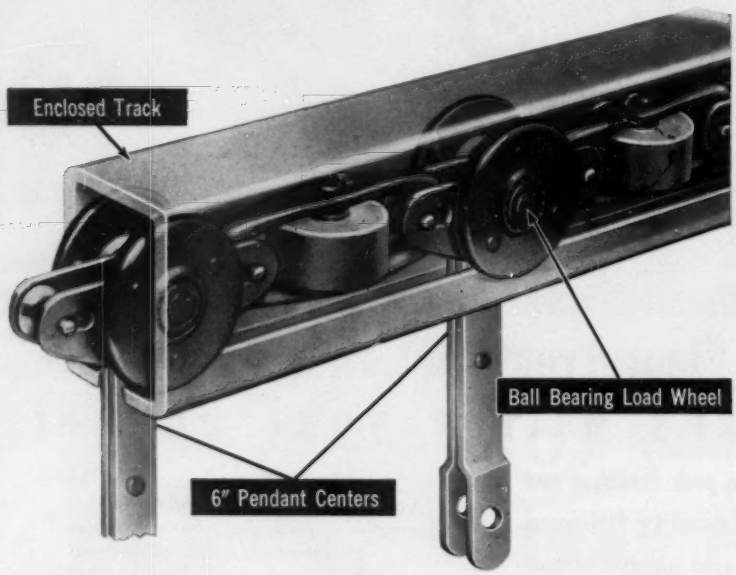
R-W "Zig-Zag"®



Continuous Power Conveyor

SETS THE PACE FOR QUALITY, SAFETY, EFFICIENCY, ECONOMY



R-W ZIG-ZAG Conveyors offer safer, more efficient, more economical service. The ball bearing chain is fully enclosed for maximum safety and to keep dirt and dust from the moving parts.

ZIG-ZAG is extremely flexible in installation. Standard sections make it easy to conform to any specifications. The system may be expanded, altered or relocated by plant personnel, usually without waste of a single part.

ZIG-ZAG Conveyors carry materials up, down, in, out and around, like water through a pipe. With carrying pendants located on 6-inch centers, ZIG-ZAG can handle most any load required in light and medium industries. A choice of drive units permits travel at any required speed with variations of 10 to 1 or better.

Unlike most other conveyors, ZIG-ZAG can get down and back up again in minimum space due to its standard 2-foot radius vertical curves.

For complete information, write for catalog No. A-93-R.

75 YEARS of QUALITY and SERVICE by RICHARDS WILCOX AURORA, ILLINOIS

SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT • INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS •

Richards-Wilcox Mfg. Co.

MATERIALS HANDLING DIVISION
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440 W. THIRD STREET, AURORA, ILLINOIS

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 28)

Now serving as assistant manager of the Fairfax Mill Division of the West Point Manufacturing Co., where he had several years ago been production manager, is **Virgil Hampton** who had been with Wellington Sears Co. since January 1950.

Clifford B. Hayes, vice-president in charge of manufacturing of the cotton and rayon division of Pacific Mills with headquarters in Lyman, S. C., has retired; however, he continues to serve the company in an advisory capacity and as a member of the board of directors. * * * **David E. Arthur, Joe C. Cobb,** and **John E. Grosland** have been elected vice-presidents of manufacturing operations at Pacific Mills. Mr. Arthur, who joined the company in 1927, is vice-president and general manager of the worsted and synthetic manufacturing facilities, with headquarters at Halifax, Va. Mr. Cobb is vice-president and general manager of cotton manufacturing plants, with headquarters in Columbia, S. C.; he came to Pacific in 1945. Mr. Grosland is vice-president and general manager of the finishing and bleachery operations at Lyman, S. C., having served the organization since 1923. * * * **John O. Lindsay** has been promoted from general superintendent of the Lyman plant to chief engineer for the cotton manufacturing division.

On July 1 **Oscar A. Shortt,** vice-president (sales) for P. H. Hanes Knitting Co. retired, having been associated with Hanes for nearly 36 years. Mr. Shortt went to Paris, France, on Aug. 14, where he is now stationed as a representative of the International Cooperation Administration of the State Department. His duties require him to travel through the countries of Western Europe as a specialist in textile dry goods wholesaling, to exchange information and provide economic assistance.

W. F. Smith has retired as superintendent of the Texas Prison System Textile Mill in Huntsville, Texas. Succeeding Mr. Smith in this position is **J. Dan Smith,** formerly assistant superintendent.

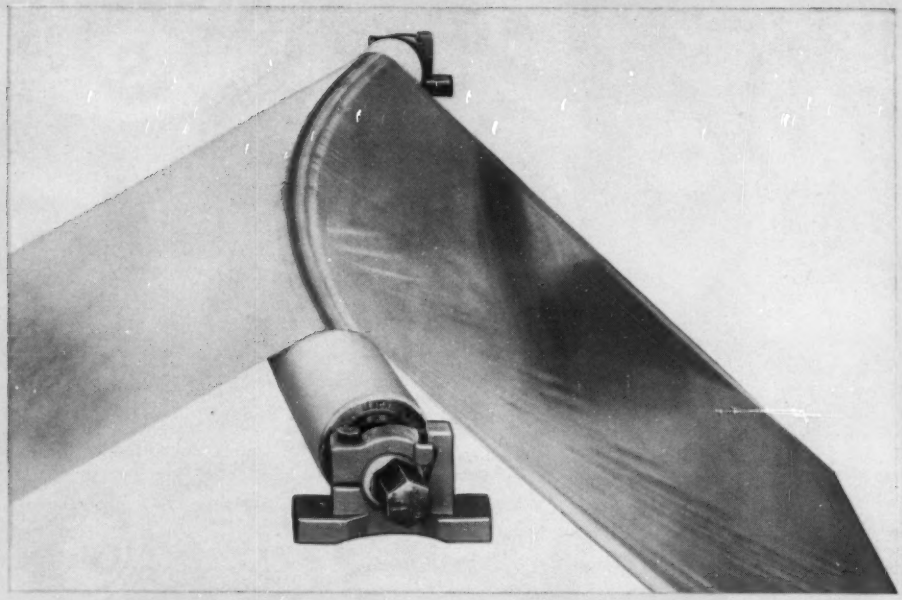
Frank W. Smith has been made assistant superintendent of the Standard Plant of Standard-Coosa-Thatcher Co., Chattanooga, Tenn. **Al Whitaker** has been promoted to per-

Mount Hope SYSTEM

INCORPORATES

"Free Wheeling" Expanders

TO HELP YOU BEAT COMPETITION!



THE MOUNT HOPE "FREE WHEELING" EXPANDER
holds your fabric to full width and free of wrinkles.

For Maximum Production— Lower Cost - Minimum Seconds - USE the Complete MOUNT HOPE SYSTEM

Write for a Production Cost Survey of your plant.

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New Mount Hope **Southern** Repair Shop to give you fast, convenient service.

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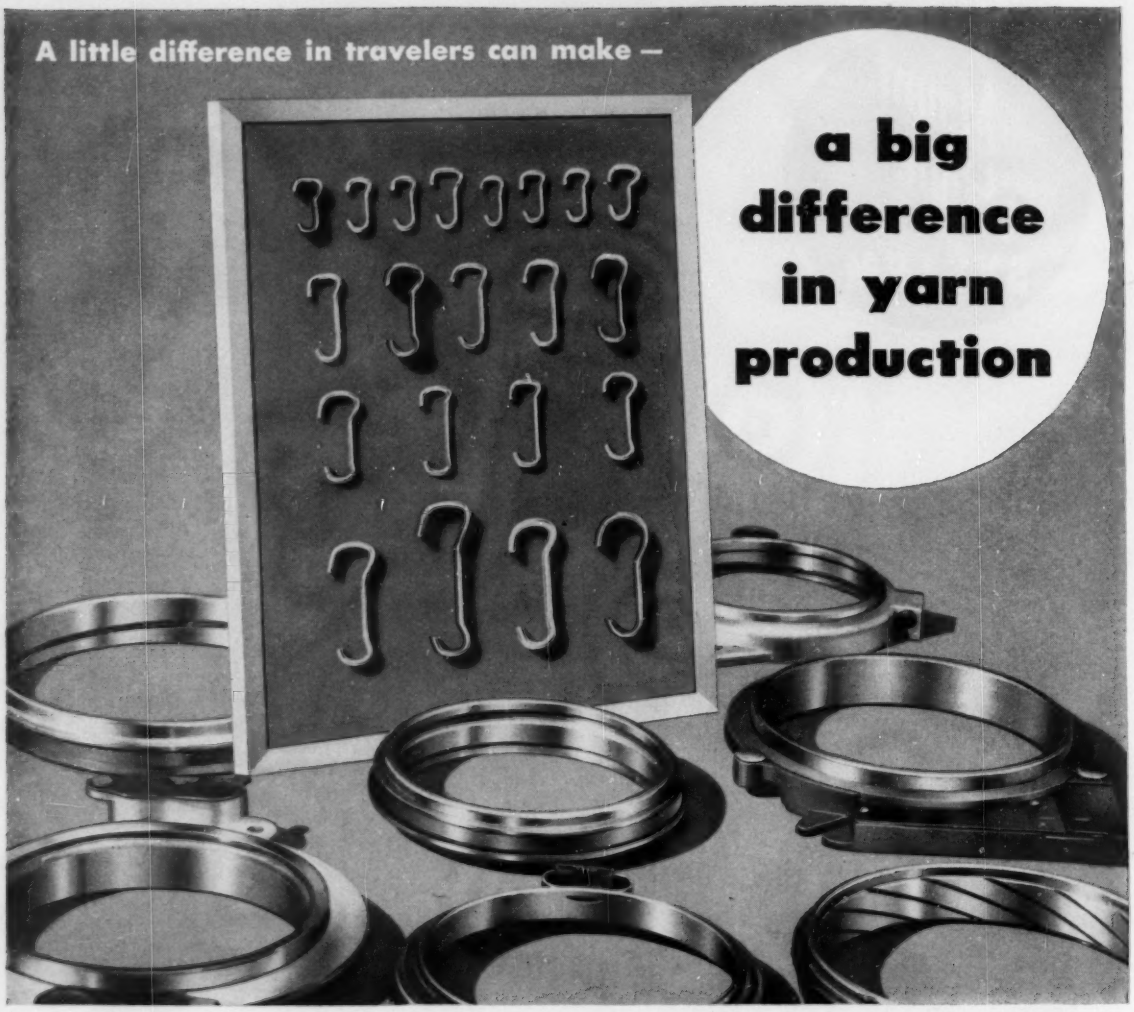
SOUTHERN REPAIR SHOP • CHARLOTTE, N. C.



THE DIFFERENCE between various styles of travelers made for lubricated vertical rings, may be hard to see at a glance. But it's a very important difference.

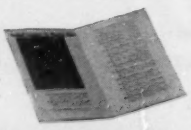
Unless the traveler design is exactly right for the ring, much of the advantage of lubrication will be lost. Also, unless the design is exactly right for the yarn being processed, ends-down will cut production, and quality will suffer.

Whether you are running novelties like boucles, poodles, or seed yarns, — or twisting the heavier stocks normally processed on lubricated rings, Victor has the right vertical travelers to keep your production trouble-free.

You'll find it well worthwhile to check over your operations with a Victor Service Engineer. He can often show you that "headaches" you've taken for granted can be readily cured. Write, wire, or phone the nearest Victor office.

VICTOR VERTICAL TRAVELERS

representative of the styles commonly used on lubricated rings are described in this folder, with useful information on selection. Ask for Form VTN.



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VICTOR Ring Travelers

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PROVIDENCE, R. I. . . . 20 Mathewson Street . . . . . Tel. DExter 1-0737

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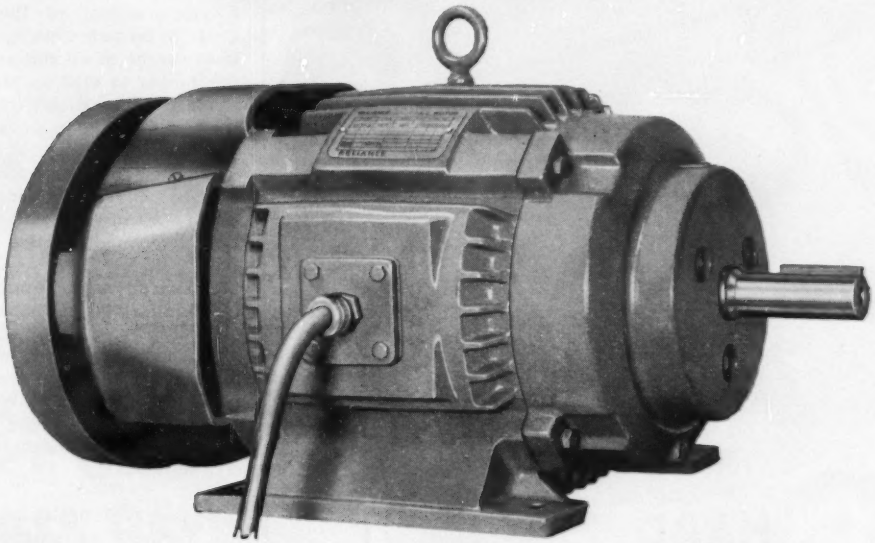
THE *FIRST* SUCCESSFUL GENERAL PURPOSE TOTALLY ENCLOSED, AIR-COOLED

TEXTILE MOTOR!



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Now available 1-20 hp. for application on Spinning, Roving (low torque), Drawing and Twisting Frames, and on Cards, Openers and Pickers.

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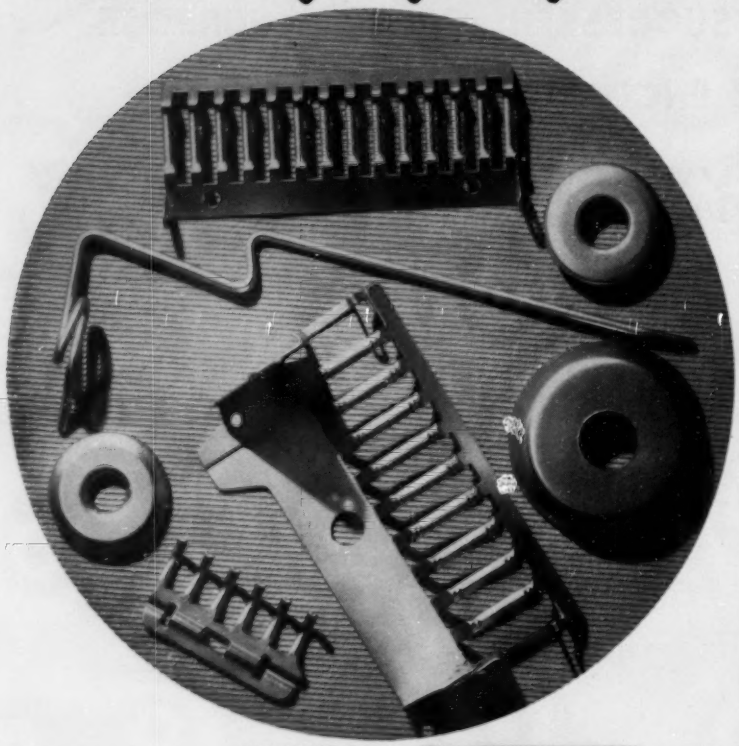
But are you getting it?



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THE LEADING NAME IN TEXTILE HARD CHROMIUM PLATING

Actually you are paying for both quality and service regardless of what you are getting. It costs *no more* to get the best hard chromium plating — it will last longer and save you money in maintenance costs.

When it comes to QUALITY HARD CHROMIUM PLATING WALHARD is second to none.

EXPERIENCE is the key to quality hard chromium plating — and SERVICE is the answer to your many requirements. We pride ourselves on both.

You will save money by making sure your next plating job is WALHARD HARD CHROMIUM PLATED.

Be Sure You Are Getting Quality! It Costs No More And Lasts Longer.

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Personal NOTES ABOUT MEN YOU KNOW

sonnel supervisor and expeditor. **David Smith** has been made overseer of the winding and backwinding departments.

A newcomer to the cotton department of Cone Mills Corp. in Greensboro, N. C., is **William Curry Stinson, Jr.** Mr. Stinson is a cotton classer, coming to Cone Mills from Roediger Cotton Co. in Danville, Va.

News from Riegel Textile Corp.: **Theodore Riegel** was recently elected a vice-president of Riegel Textile Corp. In his new capacity, Mr. Riegel is in charge of all cotton grey goods purchasing as well as inventory and production planning. He has been associated with the corporation and its predecessor companies since 1922. * * * **Dale W. Kern,** formerly chief chemist of Riegel's Central Control Laboratory in Ware Shoals, S. C., has been promoted to the position of supervisor of fabric development at the Trion Division. Named to succeed Mr. Kern at Ware Shoals was **J. H. (Joe) O'Neill,** general assistant superintendent of the dyeing and finishing plant at Trion. Succeeding Mr. O'Neill is **W. J. (Jack) Welborn** who was promoted from the position of assistant superintendent of the second shift.

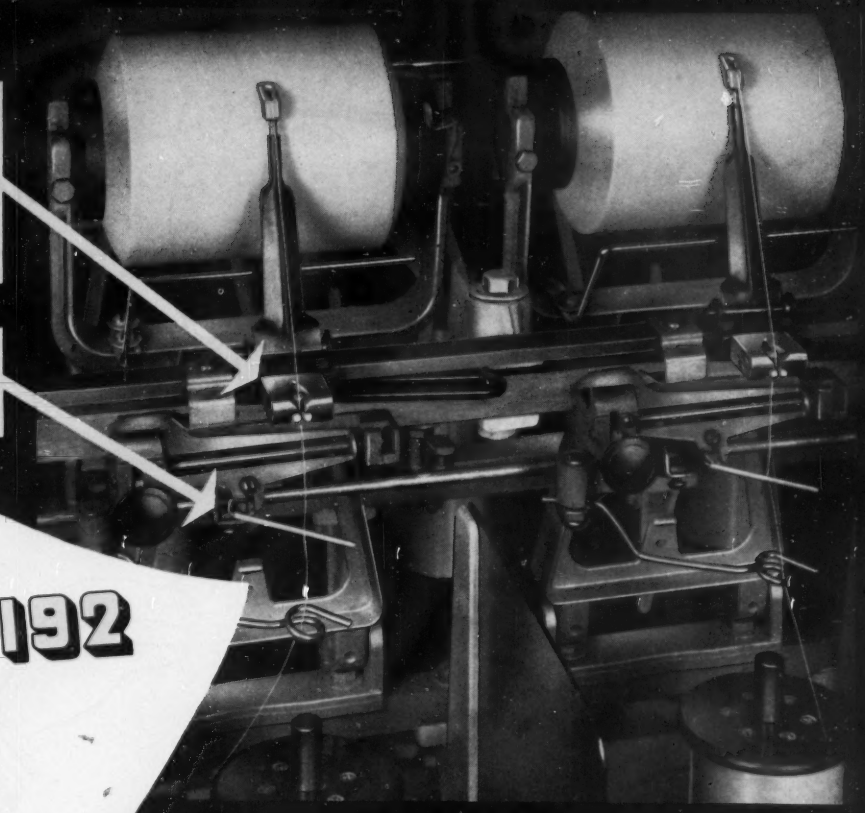
Because of ill health, **M. G. Roberts** has resigned as chairman of the board and executive committee of Scranton Lace Co., Scranton, Pa.

Dewey L. Turner of Decatur, Georgia, has been employed as public relations director of the Cotton Manufacturers Association of Georgia. In addition to assisting in the direction of the association's public relations activities, Mr. Turner will devote much of his time to the development of public relations services and programs at the community level in the more than 90 cities and towns in which Georgia's 175 textile manufacturing plants are located.

Organization changes at U. S. Rubber Co.'s Stark Mill in Hogansville, Ga.: **W. L. Martin, Jr.,** has been appointed assistant superintendent. **T. L. Meeks** is overseer of spinning. **Earl Smallwood** is shift supervisor in the carding department. Mr. Martin had been overseer of spinning in the Stark Mill since 1939. Mr. Meeks was formerly a shift supervisor in the carding department, and Mr. Small-

TYPICAL MILL INGENUITY is shown in this simple but effective cleaner. Three AlSiMag 192 yarn pins (sides, Part GR-9581; back, GR-24564) were fitted into a home-made metal holder, shim-adjustable for yarns of various deniers. In constant use for over two years, the pins show no sign of wear.

DROP WIRE SLEEVE Part GU-21584-B, is AlSiMag 513, which has exceptionally long life and uniform finish which helps maintain uniform tension.



U. S. TEXTILE FACE DRIVE DOUBLE DECK UPTWISTER with AlSiMag traverse guide, part GE-32257. Photo courtesy Kingsboro Mills, McMinnville, Tennessee.

ALSIMAG® 192 TRAVERSE GUIDES FOR U. S. TEXTILE FACE DRIVE DOUBLE DECK UPTWISTERS

Part No. GE-31110

Part No. GE-32257

ALSIMAG GUIDES HAVE NO POINT OF SUDDEN FAILURE

SAMPLES ON REQUEST

LONG LIFE!

Saves down time. Mill records made available to us prove that these AlSiMag guides outlast any other known guide by several times. These hard, homogeneous AlSiMag guides assure that mills running fine denier synthetic yarns can switch to other deniers without fear of chafed or damaged yarn.

Write for your free copy of the AlSiMag Thread Guide Catalog. It may give you time and money-saving ideas for your own operations.

54TH YEAR OF CERAMIC LEADERSHIP

AMERICAN LAVA CORPORATION

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A Subsidiary of
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For 40 years Althouse research has pioneered in raising textile industry standards of

COLORFASTNESS

This record of leadership assures highest quality performance when you specify these famous, exclusive Althouse dye specialties:

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Standardized Modular Construction

All control units are 20" wide and in multiples of 14" in height. This permits easy interchange of various sizes and types of control units without rearrangement of the entire control assembly and avoids wasting space with dead panels to adapt non-uniform control units. This standardized modular construction also insures good appearance at all times because horizontal lines match.

Star studded with features that provide fastest installation or rearrangement of motor control, maximum space economy, unparalleled motor control performance and new safety for men and equipment.

Fifteen years ago Cutler-Hammer Unitrol pioneered the idea of flexible control centers . . . the modern way to organize control equipment for better performance, greater safety, and quick rearrangement to meet industry's constantly changing control requirements. Few engineering advances ever received such enthusiastic acclaim or such rapid widespread use. Through the years there have been many imitations, but only *one* Unitrol.

Today Cutler-Hammer engineering leadership opens another new era in flexible control centers with the great new Cutler-Hammer ★ ★ ★ Unitrol. Star studded with features that permit new speed in installation, new speed in any reorganization of the equipment, more control units in less space, new safety for men and equipment and new motor control performance that simply has no equal. Whether you desire truly modern control for just a few machines, a full department or an entire factory, be *sure* you have all the facts about the new Cutler-Hammer ★ ★ ★ Unitrol before you buy. Write or wire today . . . CUTLER-HAMMER, Inc., 1456 St. Paul Avenue, Milwaukee 1, Wisconsin.

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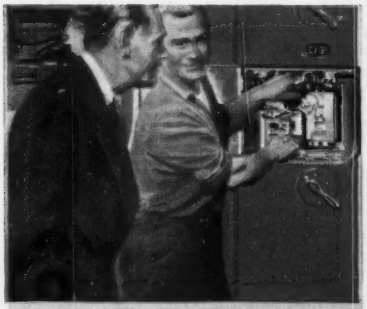
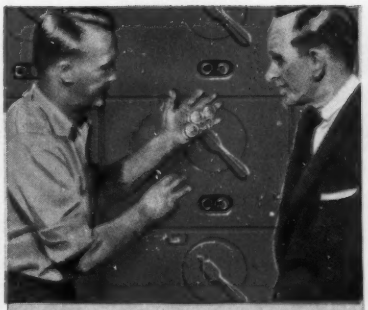


Unitrol Uni-Plug Saves Time

Uni-Plug automatically connects each control unit to its power supply when the unit slides into operating position. It also assures complete disconnect whenever the unit is pulled forward for inspection or attention. All units can be locked in "disconnect" position. Unitrol Uni-Plug thus saves wiring and rewiring time—and insures safety.



Self-Aligning Disconnect Operators

Unitrol control units can be equipped with either fused disconnect switches or circuit breakers. Both types have self-aligning three-position operators which are arranged for padlocking with as many as three locks in "off" position.

The name UNITROL is a Cutler-Hammer trade mark.

New C-H Three-Star Control Units

New Superlife Vertical Contacts end care and costs for all time in normal control uses. Adjustable Load Sensing Coils with 3% overload accuracy (compared to usual 12%) permits motors to work harder safely. Full 3-Phase Protection now costs as little as $6 (list price) additional per control unit. Compare this with the cost of just one motor burn-out.

NEW...Sales-winning TEXTILE PACKAGING

for better protection, better economy, better buyer-acceptance...

EASY AUTOMATIC OPERATION

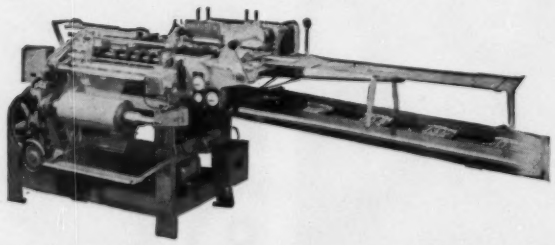
Regardless of size or shape, you get a neat, tight, perfect-register wrap on every package with a Hayssen automatic wrapping machine. Also, production men report savings up to 80% over previous wrapping costs.

FASTER, SIMPLE TO CHANGE SIZE

No complicated adjustments from size-to-size on a Hayssen. No gears or sprockets to remove or change... no need for expensive mechanics to change size, either. So simple the operator does it on the job.

COSTS LESS, DURABLY BUILT

Hayssen's simple, rugged design, using fewer moving parts, keeps these machines working and saving through years of dependable, trouble-free service. Both the cost of the machine and the maintenance are so low you won't believe it.



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Personal NOTES ABOUT MEN YOU KNOW

wood was promoted from the position of section man in the carding department.

Thomas H. Urmston, assistant general director of sales for Du Pont's textile fibers department, resigned recently to become vice-president of the Ramseur (N. C.) Worsted Mills, Inc. Mr. Urmston's headquarters are in the New York City office of the firm which is a subsidiary of William Klopman & Son.

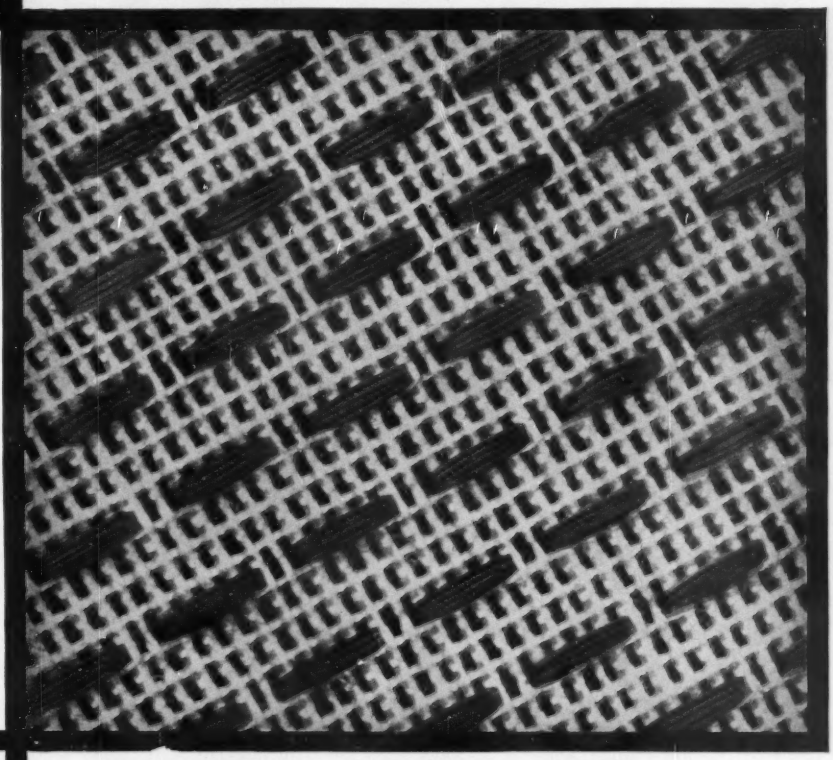
With the return of **Robert T. Stevens** to J. P. Stevens & Co., Inc., as president, director, and member of the executive committee [reported in TI for Sept. 1955], **Joseph H. Sutherland**—who had served as president since 1952—was elected vice-chairman of the board and director of sales, a newly created post. Mr. Sutherland continues as a director and member of the executive committee.

New officers of Swift Spinning Mills, Inc., Columbus, Ga., are: chairman of the board, **A. Illges,** formerly president; president, **Henry W. Swift,** formerly executive vice-president; vice-president and sales manager, **Robert T. Davis, Jr.,** formerly vice-president. * * * Elected a director to succeed the late board chairman Clifford J. Swift was **George T. Swift,** president and sales manager of Muscogee Manufacturing Co.

Five research fellows of Textile Research Institute completed their graduate studies at Princeton University and the Institute during the past year: **David M. Cates, Theodore Lemiska, Robert A. Martin, Ludwig Rebenfeld,** and **Henry K. Woo.** These men were granted the Ph.D. degree of Princeton University and have been certified by the board of trustees of the Institute as graduate fellows in textile research.

News from Woodside Mills: **T. B. Phillips** has assumed the duty of superintendent of the Haynsworth Plant of Woodside Mills. * * * **Fred "Skinny" Powers,** former star college athlete and also a former employee of Woodside Mills, has been named personnel director and recreation director of the Liberty, S. C., plants. He succeeds Billy Hair who is now playing professional football. * * * **Charles F. Mayfield** has been promoted to general overseer of weaving

The Close-up of Construction



An original fabric using B & C yarns magnified 100X.

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The Quality of Boger & Crawford Yarn is guaranteed — the highest tribute we can pay it!

Signed

Fredericka Boger

The Yarn that makes Fine Fabrics

You get fine fabrics every time with BOGER & CRAWFORD Bleached Dyed and Mercerized yarns. That is because you get quality yarns.

Illustrated is an unretouched photograph of a new fabric made with B & C yarn. Judge for yourself the distinctiveness of the fabric. Note the appealing close-up of construction.

You are invited to write today for full advantages offered by B & C quality yarns.

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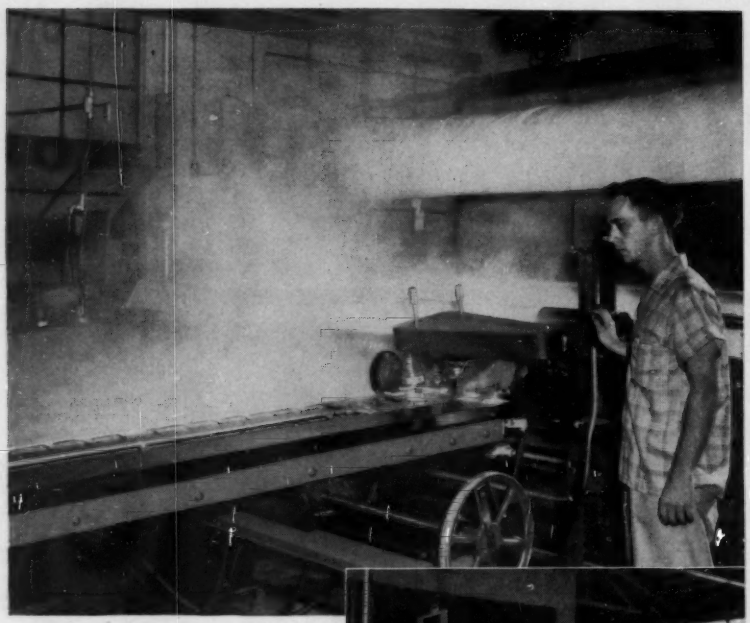
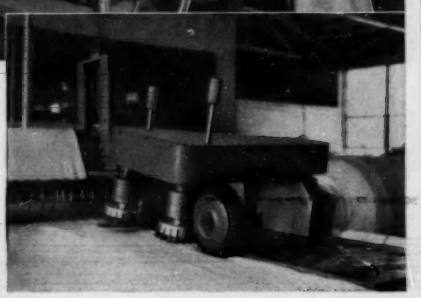
Boston 8, Mass.

Morris R. Copeland & Sons
308 Commercial Bank Bldg.
Griffin, Georgia

Dabern Textiles
460 Fourth Avenue
New York 16, N. Y.

Morris R. Copeland & Sons, Box 5032, Chattanooga, Tenn.





Askania Edge Position Control Increases Production 100%— Reduces Man Hours 25%

PIN-TENTERING FRAMES RUN AT FULL SPEED AT KINGSBORO MILLS, INC.

Kingsboro Mills, Inc., Daisy, Tennessee, manufacturers of "Rogers Lingerie" installed three Askania Edge Position Controls to operate their pin-tentering frames. Here are some of the results they report:

Doubles production! James C. Childress, dye room superintendent, reports, "Under the old system we were running 30 yds. per minute. Now with the Askania equipment we are running 60 yds. per minute—wide open. We can't run the frame any faster."

Reduces man hours 25%! Attaching fabric to the pins on the pin-tentering frame—a job that Askania now does automatically—was so tedious that employees could stand only a "couple of hours" of it. Askania does the job effortlessly—does a neater, more even job than could ever be done by hand—controls to 1/32".

No maintenance costs! No down time! Gregg Quick, Vice President of Kingsboro Mills adds, "We have three Askania units in operation; one, a year and a half old, the second installed in December, 1954, and the third in July of this year. Our men installed all three units without assistance and *we have had no maintenance at all to date.* Moisture used to short out our electronic controls and cause frequent work stoppages; there is nothing to short out on this hydraulic equipment—and it's much faster than motor driven worms."

If you have a cloth guiding problem it will pay you to investigate the advantages of Askania controls—write for details today.

ASKANIA REGULATOR COMPANY

260 E. Ontario Street, Chicago 11, Illinois

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

Personal NOTES ABOUT MEN YOU KNOW

at the Haynsworth Plant, having been promoted from the position of third shift overseer.

P. R. Williams, a foreman at Hanes Hosiery Mills Co. in Winston-Salem, N. C., and his wife **Mrs. Lettie Williams,** head of the looping department, retired on July 1 after having served the company for 40 years.

A. S. Wilson, Jr., has been elected vice-president in charge of sales of Aberfoyle Mfg. Co., Philadelphia, Pa. Mr. Wilson joined Rex Mill, Inc., Gastonia, N. C., a subsidiary of Aberfoyle, in 1939.

New superintendent of Wamsutta Mills, New Bedford, Mass., is **William E. Wilson** who was formerly superintendent of the Cherokee Textile Mills in Knoxville, Tenn.

Obituaries

Henry H. Allen, 82, retired vice-president of Bemis Bro. Bag Co.

Mrs. Rose Eisenstein, head of Penrose Knitwear Co. since 1943.

John R. Ferguson, 57, president of Dublin (Pa.) Hosiery Co.; Hemphill & Co., Inc.; Grover Ferguson & Co.; and John O. Grover & Co., Philadelphia, Pa.

Robert H. Gaddy, 50, Albemarle, N. C., hosiery mill executive.

Henry Alexander Henegar, 53, assistant general manager of Standard Knitting Mills, Knoxville, Tenn.

Stonewall Jackson, 72, president of Morton Machine Works, Columbus, Ga.

Harold Lamb, 91, president of Union Manufacturing Co., Union Point, Ga.

Frank G. North, president and treasurer of Frank G. North, Inc., and board chairman of Pioneer Heddle & Reed Co., Inc., Atlanta, Ga.

Gustav Petricek, 70, president and treasurer of United Wool Piece Dyeing & Finishing Co., Passaic, N. J.

L. Reid Terry, 69, organizer and president of Terry Hosiery Mills, High Point, N. C.

An attitude and an aptitude for solving bearing problems . . .

SPOILAGE

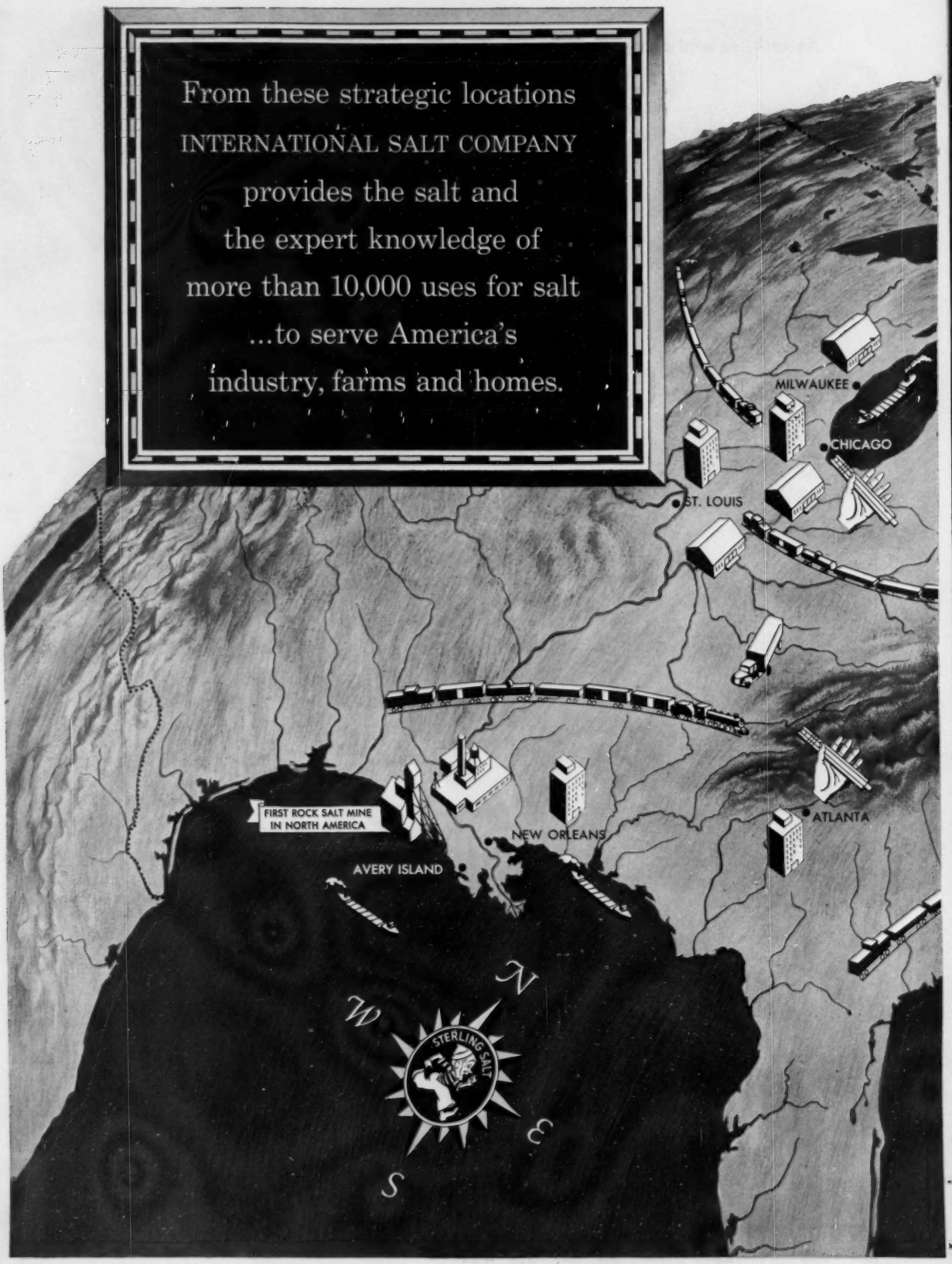
FAFNIR PILLOW BLOCK equipped with Wide Inner Ring Mechani-Seal Ball Bearing and self-locking collar.

Oil spoilage losses cease to be a problem for textile mills when plain bearings are replaced with Fafnir Ball Bearings equipped with frictionless Mechani-Seals. These grease-lubricated units are sealed against leakage and the entrance of contaminants. What's more . . . as a result of their Mechani-Seals, once-a-shift lubrication is cut to once every six months or much longer; costs of keeping machinery, fabrics and floors clean are slashed.

The same ingenuity that found a way to clean up oil leakage which ruined fabrics can be applied to your bearing problem. Whether such a problem involves material spoilage, dust, or excessive maintenance cost, FAFNIR is worth bearing in mind. The Fafnir Bearing Company, New Britain, Conn.

FAFNIR BALL BEARINGS

MOST COMPLETE LINE IN AMERICA


From these strategic locations
INTERNATIONAL SALT COMPANY
provides the salt and
the expert knowledge of
more than 10,000 uses for salt
...to serve America's
industry, farms and homes.
MILWAUKEE
CHICAGO
ST. LOUIS
ATLANTA
NEW ORLEANS
FIRST ROCK SALT MINE
IN NORTH AMERICA
AVERY ISLAND
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E
S
STERLING SALT

1,137 FEET BELOW THE MOTOR CITY
DETROIT
BUFFALO
RETSOF
LUDLOWVILLE
LARGEST ROCK SALT MINE IN THE WORLD
WATKINS GLEN
BOSTON
CLEVELAND
SCRANTON
CINCINNATI
PITTSBURGH
NEWARK
NEW YORK
PHILADELPHIA
BALTIMORE
RICHMOND
MINES:
Retsof, N. Y. • Detroit, Mich. • Avery Island, La.
REFINERIES: Ludlowville, N. Y.
Watkins Glen, N. Y. • Avery Island, La.
SALES OFFICES:
Atlanta, Ga. • Chicago, Ill. • New Orleans, La.
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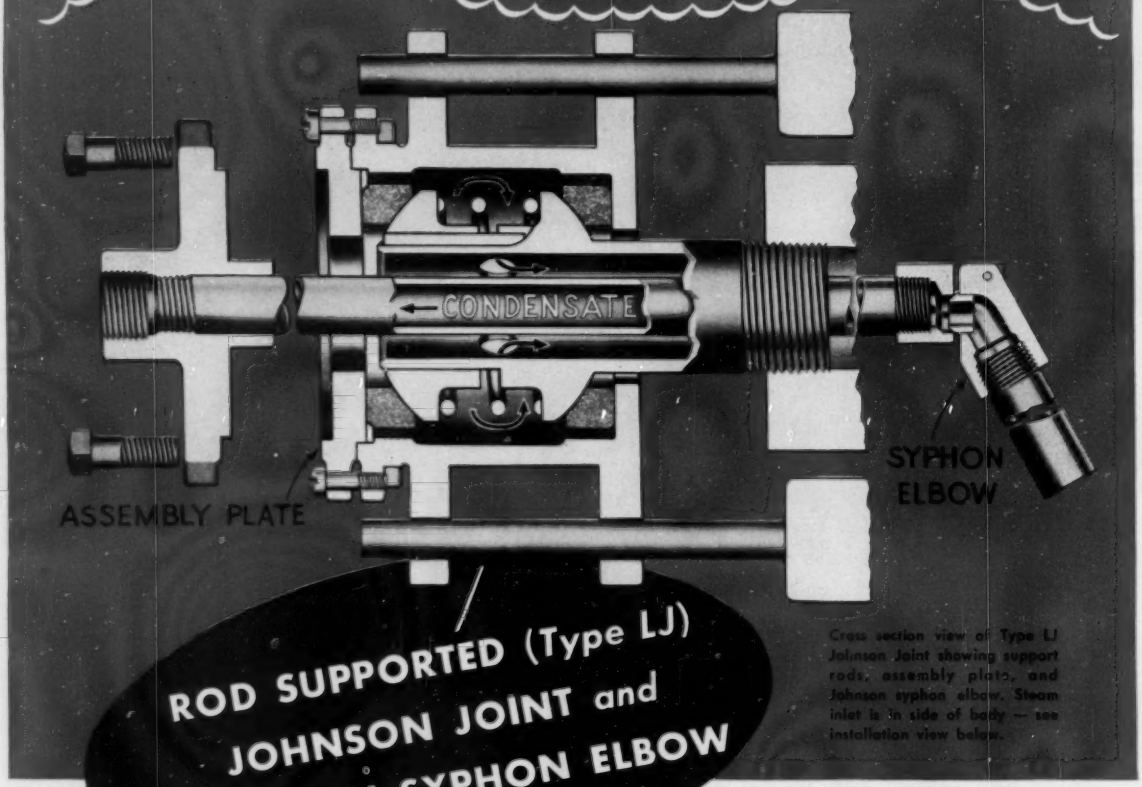
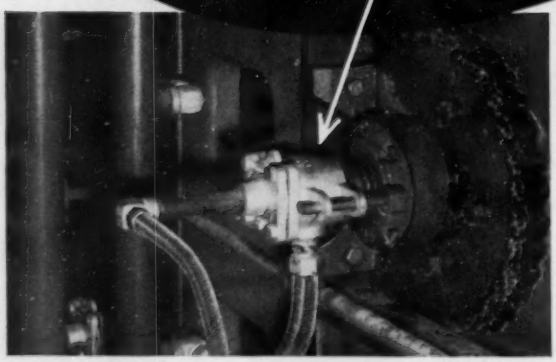
★ "Salt Headquarters"
International Salt Company, Inc.
Scranton, Pa.

Floating Action makes the big difference!



Cross section view of Type LJ Johnson Joint showing support rods, assembly plate, and Johnson syphon elbow. Steam inlet is in side of body — see installation view below.

ROD SUPPORTED (Type LJ) JOHNSON JOINT and JOHNSON SYPHON ELBOW



Rod-supported Johnson Joint installed in southern mill on 23" diameter x 60" face dry cans operating at 100 yards per minute, 35 lbs. steam pressure.

Write for complete information on Type LJ Joints with Syphon Elbows.

This is the Johnson Joint combination that is proving especially suited for dry cans, print cans and 30" cylinder slashers.

The Type L body has lugs cast on it, so it can be hung on simple supporting rods. All the weight of the housing and pipe connections is thus lifted from the rotating assembly of the joint. These rotating parts "float" freely inside — have only their primary task of maintaining a seal. Longer service life and reduced down-time are direct results.

Perfect team mate is the Johnson Syphon Elbow — successor to the old unwieldy, long radius syphon pipes. It opens to pass through the joint, closes of its own weight to a tight seal when in position. The joint is fitted with a special assembly plate to hold internal parts in position when head is removed to insert or remove the syphon pipe.

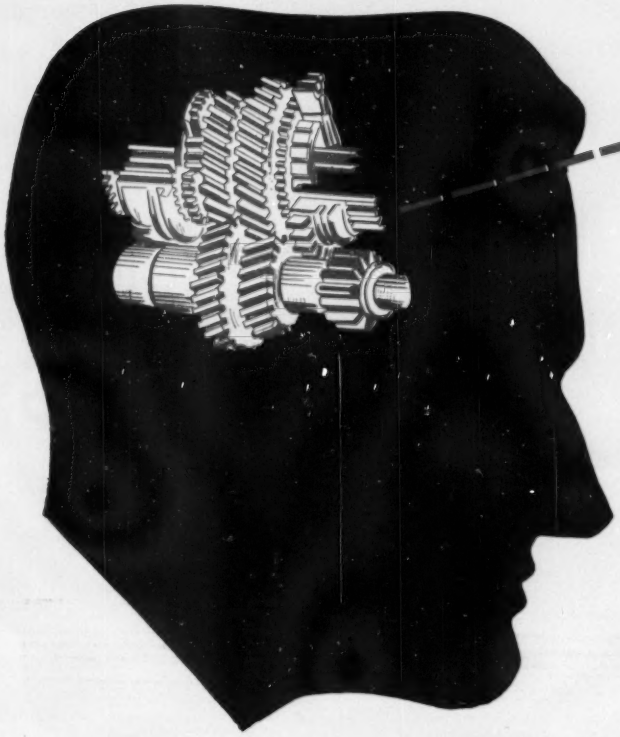
Most machinery manufacturers now provide bosses on bearing housings which can be utilized for this type of mounting. So that you can try this combination in your own mill we will gladly supply a couple of units for 90-day test, without any obligation.

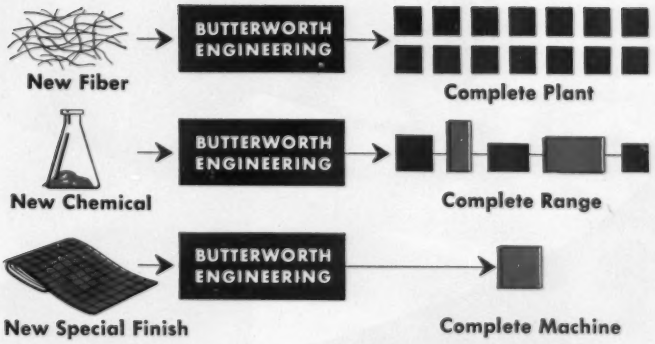
Products of The Johnson Corporation

815 Wood St., Three Rivers, Mich.

Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters

nothing to start with... BUT... an idea!





Butterworth experience and skill in Developmental Engineering are ready to work for you, to translate your ideas into realities — into the process, the product, or the machine you need to push back the horizons of your industry.

At Butterworth your assignment is top-drawer classified, with complete secrecy guarding each step. Butterworth engineers become your engineers, producing precisely the end result you need. Got an idea clamoring for development? Then write or call Butterworth today.

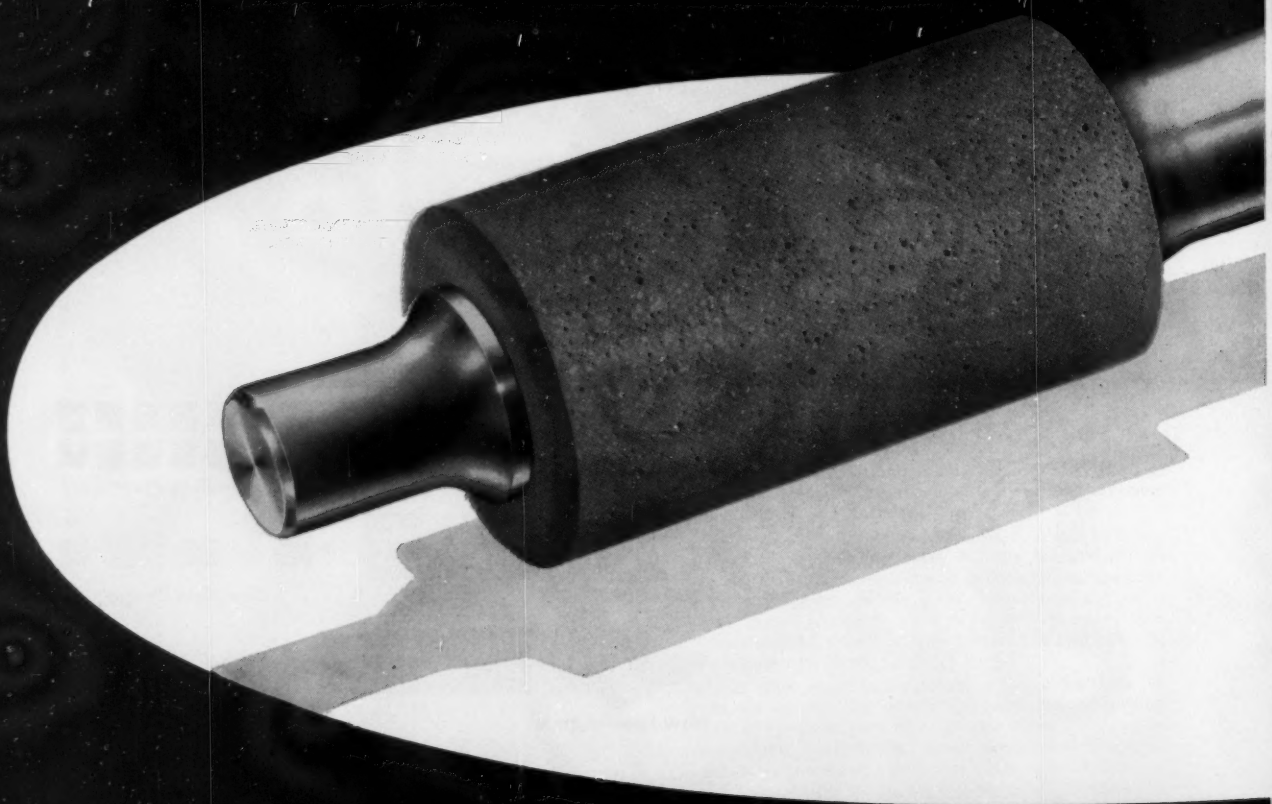
Developmental Engineering • Research • Machine Building

H. W. BUTTERWORTH & SONS CO.
Bethayres, Pennsylvania **Since 1820**

Announcing the All New Cot

Dayco EW-540

Here's news about the most important advancement in cot performance in the last decade!



Won't glaze or slicken—reduces buffing to a minimum!

Made with thousands of microscopic cells which are opened up by the continuous traversing of the yarn, Daycos *stay dry*—never become glazed or slick. This means fewer buffings, longer runs between buffings. For all the money-saving facts request your copy of the new Dayco EW-540 data sheet.

Dayton Rubber Co., Textile Division, Dept. 305,
401 S. C. Nat'l. Bank Bldg., Greenville, S. C.

Amazing, New Micro-Porous Surface RENEWS itself!

Exclusive with Dayco EW-540 Cots is a cellular structure which *renews* itself continuously through the normal process of wear. This constant porosity relieves surface tension—the major cause of lap-ups and ends down—for the life of the cot. This means big savings in time and money, as well as increased production, for mill operators everywhere.

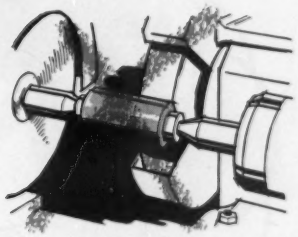
GOLDEN JUBILEE

Dayton Rubber

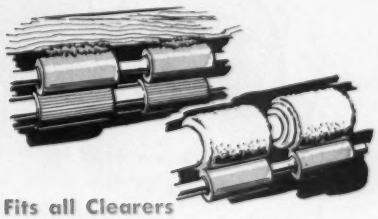
50 YEARS OF PROGRESS

Dayco and Dayton Thorobred Textile Products for Better Spinning and Weaving

Only Dayco EW-540 Cots have all these features:

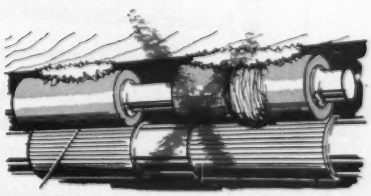


Runs 2 to 3 times longer without buffing— Tested under actual mill conditions these sensational Dayco EW-540 cots have been in operation for over 2½ years. During that period *not one test cot has ever required buffing*. Important, too, Daycos will not lap even in 65 to 70% humidity—nor will they pick up oils or cotton residue.



Fits all Clearers

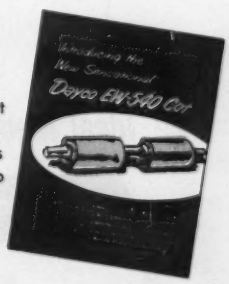
New Daycos are effective general purpose cots and work to perfection with either flat or revolving clearers. Superior, in every respect, to any other cot on the market, Daycos have proved their ability to keep eyebrowing to the absolute minimum.



Prevent Lap-Ups and Excessive Ends Down— Because Dayco cellular porosity relieves surface tension, lap-ups are virtually eliminated. Ends down are guided directly to the waste roll and are prevented from becoming entangled in other strands which would cause more ends down to occur.

Get the Facts

No mill superintendent can afford to be without the complete facts on the amazing Dayco EW-540 Cots. Send for your copy of Fact Sheet TODAY!



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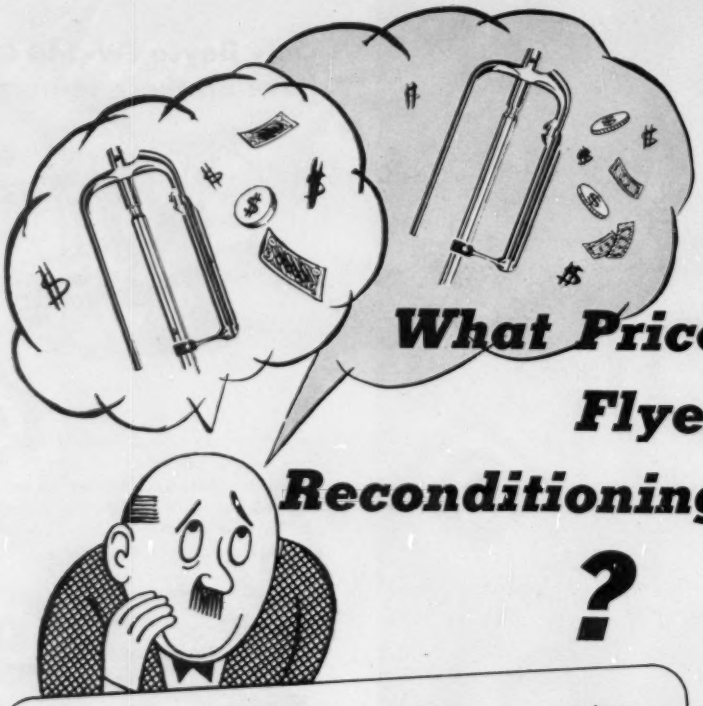


What Price Flyer Reconditioning ?

Ideal offers a wide range of Flyer Reconditioning prices, depending on the work to be done and the finish you select. In each range, Ideal prices compare most favorably with any others.

Ideal's full Flyer Reconditioning Service is in a class by itself, because it includes services not available elsewhere. In addition to rebuilding and machining all worn parts to factory specifications, it includes extras such as:

Heat Tempering for extra rigidity

Selecto-Speed Balancing* to run smoothly at your machine speeds

Your choice of 5 superb finishes, including the exclusive highly rust and tag resistant Ideal Finish**

No matter what your needs may be, it will pay you to discuss them with an Ideal sales engineer. Write, call, or wire for complete information.

*Patented
**Trade Name

Ideal Machine Shops, Inc., Bessemer City, N. C.

Continuous Service to Textile Mills Since 1925

What the TEXTILE MILLS are doing

The 5,500 employees of the **Appleton Plant** of the cotton and spun fibers division of J. P. Stevens & Co., Inc., in Anderson, S. C., ate about 3,000 pounds of barbecue recently and witnessed the presentation of a plaque for completion of 2,000,000 man-hours without a lost-time accident.

Construction of a 50,000 sq ft plant for the production of women's seamless nylon hosiery is planned by **Acme Hosiery Mills, Inc.,** Asheboro, N. C. According to the announcement, the company's looping and knittir g operations will be removed to the new plant next spring, and the present plant will house expanded finishing and shipping operations.

In a 9,000 sq ft building in Selmer, Tenn., **Ar-Na Hosiery Co., Inc.,** ha; 80 knitting machines in operation. The new company was organized b; Robert Nash and Peter Arnold.

Recently licensed by **Botany Mills, Inc.,** Passaic, N. J., to manufacture Botany men's and women's woolen and worsted fabrics for the Canadian market was the Toronto, Canada, worsted manufacturer, **Lester & Burton, Ltd.** It has also been announced that Botany has organized a Canadian company designated as **Botany Mills (Canada) Ltd.** to handle operations and sales.

A branch plant of **Brumby Knitting Mills, Inc.,** of Murphy, N. C., is being constructed at Young Harris, Ga., with completion scheduled for January of 1956. It is estimated that approximately 75 persons will be employed in the modern, air-conditioned plant producing knitted underwear and T-shirts.

Worsted and synthetic yarns are to be produced in a new plant being established in Dillon, S. C. Designated **Carolina Worsted Yarns Inc.,** the mill is a subsidiary of the Moore Corp. of Philadelphia, owner of Dillon (S. C.) Spinning Corp. It is expected that about 50 persons will be employed in the new mill. Joseph Spitalny of Philadelphia has been named manager of the plant.

Agreement for merger of **Chadbourn Hosiery Mills, Inc.,**—an organ-

RUB-A-DUB-DUB,

FAST FINISHES IN A TUB—

YOURS WITH

RHONITE R-1*

It's a new washday song when cottons, rayons, or blended fabrics are made crisp and wrinkle-resistant with RHONITE R-1. It pleases our wise little owl no end because he knows all that fresh, springy beauty will still be there after this dunking and many, many more.

CHEMICALS FOR INDUSTRY

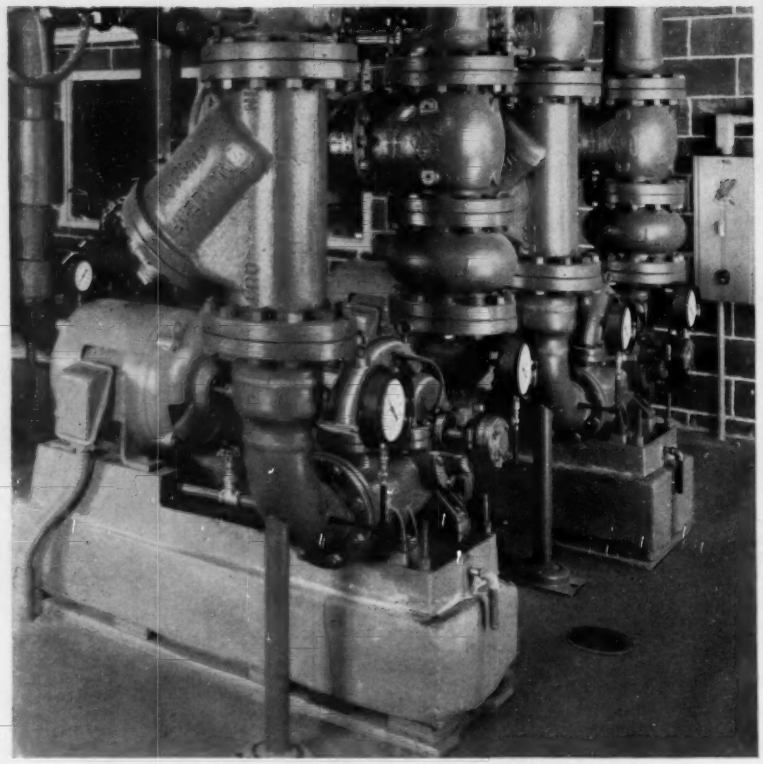
ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

***RHONITE R-1** is another dependable chemical product for the textile industry made by the makers of LYKOPON.

RHONITE *and* LYKOPON *are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.*



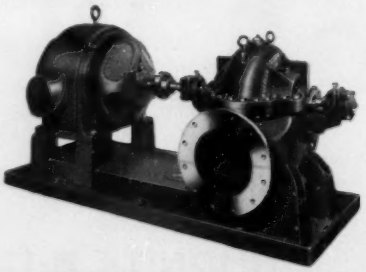
WILL THE PUMPS MATCH THE EXCELLENCE OF YOUR INSTALLATION?

The wrong pump can spoil the most perfectly planned job—the right one helps make it a lasting success! "Buffalo" Pumps like the Double Suction Type SL below (for clear water service) have earned the reputation for reliable performance over and over. The "Buffalo" Q Factor—*the built-in Quality which provides trouble-free satisfaction and long life* — goes into every "Buffalo" Pump you specify.

WHY TAKE A CHANCE?
PICK
"Buffalo"
THE PUMPS PROVEN BY 78 YEARS OF SATISFACTION.

YOUR "BUFFALO" REPRESENTATIVE

is ready with competent help in selecting the right pump for any problem you may have. Graduate Engineers, factory and field trained. In all principal cities. Call on your nearest one!



"Buffalo" PUMPS

BUFFALO PUMPS, INC.
175 MORTIMER ST., BUFFALO, N. Y.
Subsidiary of Buffalo Forge Company
Canada Pumps, Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

What the TEXTILE MILLS are doing

ization with headquarters in Charlotte, N. C., and operating a chain of mills in North Carolina, Virginia, and Georgia, producing hosiery for women—and **Gotham Hosiery Co.** of New York, manufacturers of hosiery and lingerie, has been announced. **Chadbourn-Gotham Co.** is the name which has been chosen for the new corporation.

Chicopee Mfg. Corp. recently presented to Oconee County, S. C., a building in Walhalla, S. C., to be used for a library.

At **China Grove Cotton Mills Co.** in China Grove, N. C., 36 old model combers have been replaced by the installation of 11 new ones. Also, 44 deliveries of four-roll drawing have been added to present equipment.

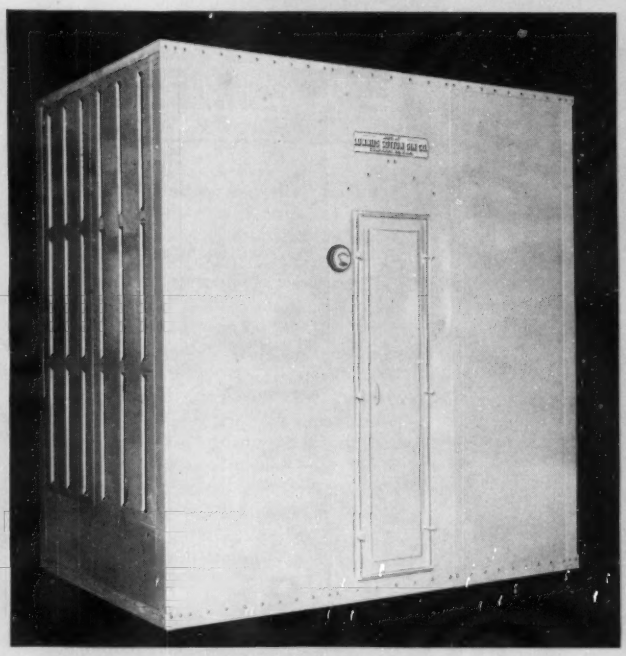
Cowikee Mills, Inc., of Eufaula, Ala., has made available a $3,000 scholarship to a freshman entering the textile school at the Alabama Polytechnic Institute this fall. The recipient will be given $750 per year for the four college years. According to Comer Jennings, president of Cowikee, the scholarship will be awarded annually under the Avondale scholarship plan.

According to an announcement, **Creston Knitting Mills,** producers of boys' polo shirts and children's pajamas, has under construction in Swainsboro, Ga., a $350,000 air-conditioned plant which will eventually employ more than 600 persons. It is planned that two other units, to be set up in the future, will handle the manufacture of boys' and girls' knitted outerwear and will include all phases of production, including knitting, dyeing, and bleaching.

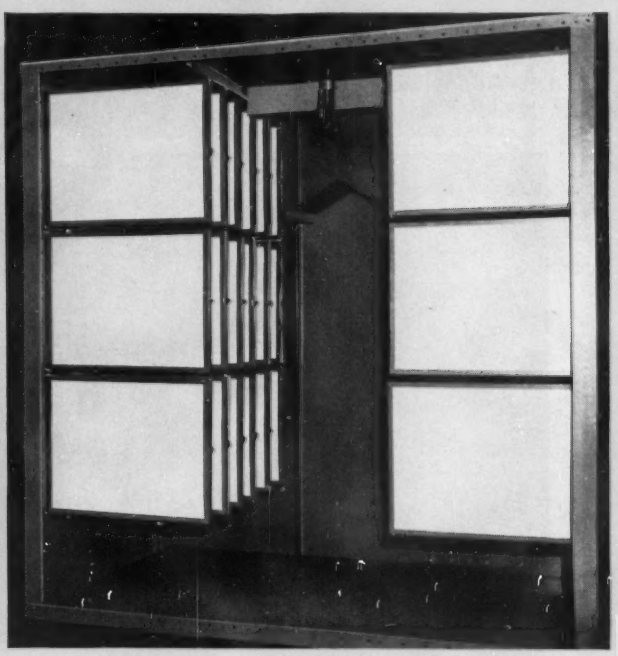
Formed to dye women's nylon hosiery was a new firm, **Delaware Valley Dye Works.** It is located at 2824 Helen St. in Philadelphia, Pa.

Five million man-hours without a disabling injury—that was the safety record built up recently at **Drayton Mills** in Spartanburg, S. C. It was reported that the record tops all safety high marks in South Carolina textile mills and is also the most outstanding record in all Deering-Milliken mills.

Erwin Mills, Inc., has given ten acres of land across from its No. 6



This is the outside of the Lummus Air Filter for textile mills. It occupies only 50.4 square feet of floor space, yet will handle 8,000 cubic feet of air per minute from opening or picking machines on middling cotton. Dimensions: 8' 11" high; 9' wide; 5' 6" deep. It fits readily into present arrangement of most opening rooms.



This is the interior of the filter, showing the easily removable filter pockets in place over the air exhaust slots shown in the picture to the left. Each pocket is really a clamping frame into which inexpensive non-woven fabric is inserted over a fiberglass mat—for quick replacement, when necessary.

FOR COMPLETE SEPARATION OF AIR FROM DUST OR LINT

THE LUMMUS

Textile Mill AIR FILTER

A highly porous, non-woven fabric, covering a fiberglass mat, the whole easily removable for quick changes as needed, is the inner secret of this filter. The filter pockets are highly porous so the air pours through with almost no back pressure, yet the texture is so fine that it traps the finest dust. Replacement is not only quick, but inexpensive. The interval depends on the type of dust in the air.

We stress again that word "complete". In the simplest, most effective manner yet devised, this air filter takes out all the sensible dust or lint from the 8,000 feet of air which pass through it each minute of operation.

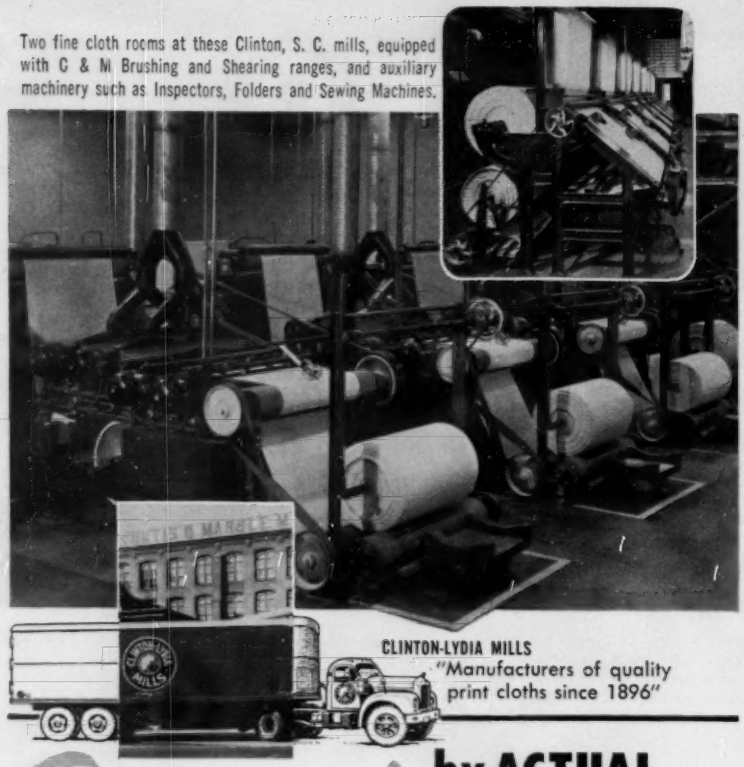
Without moving parts, it requires no maintenance, except occasional replacement of the filter media. It requires no power.

Sold and installed by

AldricH MachinE WorkS

Greenwood, South Carolina

Two fine cloth rooms at these Clinton, S. C. mills, equipped with C & M Brushing and Shearing ranges, and auxiliary machinery such as Inspectors, Folders and Sewing Machines.



CLINTON-LYDIA MILLS
"Manufacturers of quality print cloths since 1896"

Preferred- by ACTUAL MILL PERFORMANCE

The first range of Curtis & Marble cloth room machinery was ordered for Lydia Mills in June, 1952. In December, 1953, three ranges were ordered for their Clinton Mill. In August, 1955, three more ranges were ordered for the Lydia Mill, along with an additional single range for the Clinton mill.

Thus, by actual mill performance, Curtis & Marble Cloth Room machinery is preferred for fast, high quality, dependable operation.

For complete information on these and other Curtis & Marble machines — write Dept. A for descriptive literature.

Curtis & Marble MACHINE CO.
WORCESTER • MASS.

Manufacturers Since 1831
of finishing machinery for a wide range of fabrics

What the TEXTILE MILLS are doing

plant on Trinity Avenue in Durham, N. C., to be used as a site for a new Y.M.C.A. building.

News from **Fieldcrest Mills, Inc.:** A new blanket made entirely of Acrilan has been introduced by Fieldcrest. Called "Chateau," it is available in 72" x 90" and 80" x 90" sizes. * * * Two large trucks have been leased for long distance hauling of rug yarns, unfinished goods, and some raw materials and supplies. It is expected that substantial economies will be made under the new set-up—in addition to the saving in shipping costs, it is believed that movement of the materials will be expedited, thereby aiding production. An extra trailer is used to expedite handling. Enough drivers have been employed to keep the trucks on the road almost constantly.

A new firm has been incorporated in Philadelphia, Pa., to manufacture tapes—**J. E. Fite Mfg. Co.** John E. Fite is head of the new firm.

Operations are reported to have ceased at the Utica, N. Y., mills of **Flagg-Utica Corp.**, and the majority of the equipment is being moved to the firm's plants in Anniston and Florence, Ala.

A $1,000,000 bag manufacturing plant at 1400 Annunciation St. in New Orleans, La., has been dedicated by **Fulton Bag & Cotton Mills,** headquarters of which are in Atlanta, Ga.

Georgia Knitwear Co., Inc., is the new name of the Atlanta, Ga., knit goods manufacturer formerly known as **Georgia Knitting Mills, Inc.**

Glenn Mills, Inc., of Lincolnton, N. C., and **Wisteria Hosiery Mills, Inc.,** of Gastonia, N. C., have been merged to form a $1,087,900 corporation for the manufacture and sale of many types of hosiery and textile products. Name of the integrated corporation is the **Glenn Mills, Inc.**

Greer (S. C.) Manufacturing Co. is the name of a new company which has been formed to lease and operate the plant of **McCall Manufacturing Co.** in Greer. President of Greer Manufacturing is R. W. Linscott, Jr., who is also president of Lincoln Mills of Alabama. R. C. McCall, president of

(Continued on page 70)

She's Sitting on a Thousand Brilliant Colors!

WE'VE posed our young lady and her pretty dress atop that pile of coal for just one reason: To remind you that you *can* enjoy distinct benefits when you buy vat dyes from Pittsburgh Coke & Chemical. For example:

(1) Colors of uniform high purity and fastness—thanks to painstaking quality control in our completely integrated plant.

(2) Efficient customer service. Our large Applications Laboratory is at your service.

(3) Continuous long-range research to develop new and better dyestuffs.

(4) Fast, dependable sales service and shipments from our strategically located sales offices (Spartanburg, S. C., Providence, R. I.) and warehouses (Charlotte, Philadelphia and Spartanburg).

(5) 24-hour-a-day telephone sales service at our Spartanburg headquarters . . . including weekends and holidays!

Let us work with you on *your* vat dye requirements. Write or phone today.

W&D 5147R

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Dyestuffs
PITTSBURGH
COKE & CHEMICAL CO.
Dye Sales Headquarters
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COAL CHEMICALS • AGRICULTURAL CHEMICALS • FINE CHEMICALS • PROTECTIVE COATINGS • PLASTICIZERS • ACTIVATED CARBON • COKE • CEMENT • PIG IRON

Two important names in the Textile Industry . . .

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FAIRTEX® YARNS

Metallic Yarns
Supported Metallic Yarns
Mylar* Metallic Yarns

Whether you weave, knit or crochet . . . whether you work in cotton, wool, silk, linen or the synthetics . . . give your fabrics greater eye-appeal and buy-appeal with new, glittering FAIRTEX Yarns.

These new FAIRTEX Yarns are backed by many years of experience and fifteen months of research and development. To Branson Company's comprehensive knowledge of weaving and knitting has been added Lassiter Corporation's notable proficiency in the plastics field.

FAIRTEX Metallics are non-tarnishing, highly color-fast and heat-resistant . . . they may be fabricated with ease on practically any type of machine.

FAIRTEX Metallic, Supported Metallic and the new Mylar* Metallic Yarns are available now in a wide range of sparkling colors to meet the designers' every requirement.

*Registered Trademark for Dupont's Polyester Film.

FAIRTEX® YARNS

Metallic • Supported Metallic • Mylar* Metallic

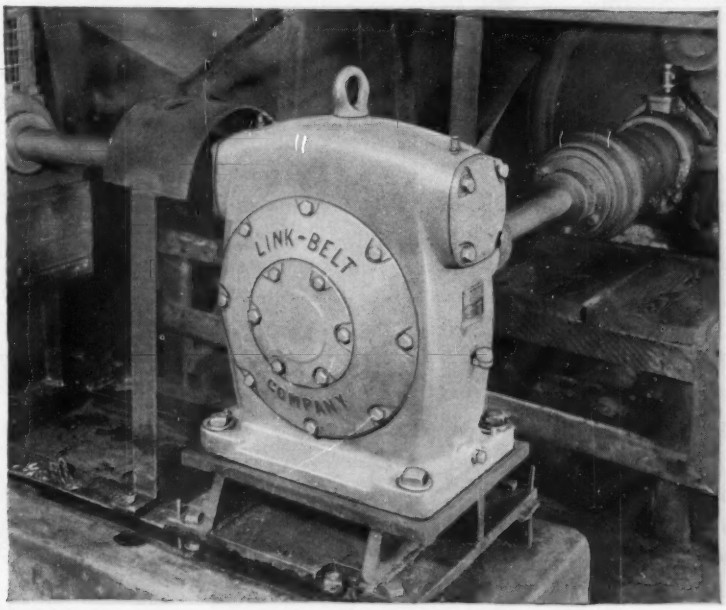
Fairtex Corporation
Charlotte, N. C.

CHARLOTTE
Lanier Branson, Jr. and J. E. MacDougall, Jr.
1808 Liberty Life Bldg.

CHICAGO Napier & Harshman
3555 Peterson Ave.

NEW YORK Robert Napier
51 E. 42nd St.

Here's industry's most comprehensive line of WORM GEAR DRIVES

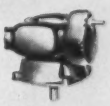


Reel at the wind-up end of paper machine is driven through a dependable Link-Belt Worm Gear Drive.

Type WB — Single reduction, worm below gear, horizontal output shaft.

Type WV — Single reduction, vertical output shaft (up or down).

Type HWB — Helical gear first reduction, worm gear final reduction. Worm below gear, horizontal output shaft.



Type HWV — Helical gear first reduction, worm gear final reduction. Vertical output shaft (up or down).

Type DWB — Double worm reduction gear, horizontal output shaft.

Type DWV — Double worm reduction gear, vertical output shaft (up or down).

Type WVS — Single reduction, worm on top of gear, horizontal shaft with screw conveyor flange.

Type WVT — Single or double reduction overhead conveyor drive.

FOR efficient, high-ratio, right-angle speed reductions, choose from the complete Link-Belt line of worm gear drives. A wide selection of single-worm, double-worm and helical-worm gear reductions assures you of the best drive for large and fractional horsepower requirements.

All three types are available with horizontal and vertical housings to permit convenient, compact connections to prime movers and driven machinery. And a choice of two shaft diameters facilitates direct connection or the accommodation of heavy overhung loads.

Single Worm Gear Drives are offered in ratios from $3\frac{1}{10}$:1 to 100:1 with output capacities up to 97.9 hp.

Helical Worm Gear Drives are available in ratios from 26:1 to 540:1 — output capacities up to 56.7 hp.

Double Worm Gear Drives have ratios from 26:1 to 8000:1—output capacities up to 26 hp and 124,800 inch pounds torque.

Get all *the facts on Link-Belt Worm Gear Drives. Contact your Link-Belt office or authorized stock-carrying distributor. Or write today for Book 2324-A.*

LINK-BELT

ENCLOSED DRIVES

13,873

LINK-BELT COMPANY: Executive Offices, 307 N. Michigan Ave., Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office: New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World.

A Scientific Approach to Pollution Control

This is the second in a series of advertisements based on a technical paper by B. W. Dickerson, Sanitary Engineer, Hercules Powder Company. A complete copy of the report or additional technical data on CMC Warp Size can be obtained by writing direct to Hercules.

Where does pollution in textile mills begin? Sanitary engineers today know that up to sixty per cent of BOD (Biochemical Oxygen Demand) pollution is a result of the desizing operation. They also know that the starch normally used as a warp size and subsequently removed by enzyme extraction and hot water builds up the BOD in finishing mill waste discharges. Such knowledge provides a real starting point for any pollution control program.

Considerable interest in the past has been shown in the use of substitutes for this starch and many synthetic film-formers have been evaluated. While these materials have proved satisfactory substitutes for all or part of the starch used in warp sizing, their high cost has made their use impractical.

Hercules® CMC Warp Size, while higher in cost than starch, is less expensive than other synthetic film-formers. Its use also permits substantial reductions in solids add-on. In many instances it decreases the amount of water used in desizing, and eliminates the need for enzymes in the desizing process.

Because of its unusually low BOD value, CMC Warp Size permits significant reduction in pollution load. When used alone in sizing, the resultant BOD has been cut by 98 per cent. When used in combination with starch, CMC Warp Size, because of its excellent film-forming properties, appears to coat the starch molecules with a film that makes them resistant to bacterial action during the early stages after mill wastes are discharged into the stream. Thus, such CMC Warp Size starch wastes move downstream to larger, fast-moving water before developing a BOD load sufficient to contribute to pollution.

Where over-all reductions up to 30-40 per cent in the pollutional load are required, a 2 to 1 starch-CMC Warp Size combination provides the necessary reduction in BOD without capital outlay for treatment equipment. Where larger reductions are required, the use of the starch-CMC Warp Size combination means a substantial reduction in the size of the treatment plant required and can reduce operating and financing costs of such a plant by as much as fifty per cent.

Virginia Cellulose Department

HERCULES POWDER COMPANY

INCORPORATED

903 Market St., Wilmington 99, Del.

VC55-6

when it's **TUBES** for winding

S-t-r-e-t-c-h

NYLON

SONOCO

is the name to remember!

Our more than 50 years experience enables us to produce the right carrier at the right time. We have one for winding stretch nylon—now. These tubes were specifically designed for this purpose. Available in various colors or with color tips, with the wall thickness desired and inside dimensions and lengths to meet your specifications. Spiral or Convolute. Deliveries made to fit your scheduling.

Sonoco also manufactures a wide variety of tubes and cores for the textile industry. Sizes range from ⅛" I.D. up to 36" I.D. with any practical wall thickness and length.

SURFACES	Plain, sized, polished, Unitex or Velvet (solid or banded), parchment wrap, scored, embossed, impregnated, perforated or in combination.
ENDS	Plain, crimped or burnished—with "V" slit, rectangular, square or half circle end notches.
IDENTIFICATION	Colored paper, solid or outside or inside wrap, lacquer or dye tipped, printed on ends.

Discuss your carrier problems with one of our experienced sales engineers or write direct to the sales office nearest you.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
PHILADELPHIA, PA. AKRON, IND. GARWOOD, N. J. GRANBY, QUEBEC
MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.

DEPENDABLE SOURCE OF SUPPLY

Here's How HYSTER® *PLANNED* MATERIALS HANDLING SAVES TIME AND MONEY in textile mills

Here are typical examples of how Hyster Industrial Trucks are helping to make *tremendous* savings in materials handling costs in *textile mills.*

Whether you are now using lift trucks, or haven't ever used industrial trucks of any kind, your Hyster Dealer is ready to help you achieve cost reductions. Because he keeps abreast of the materials handling problems and improvements, he has helped many textile mills realize more profit from their operations. *Why not call him today* and take advantage *of his specialized services? Materials Handling Trucks from 1,000 to 30,000 pound capacities.*

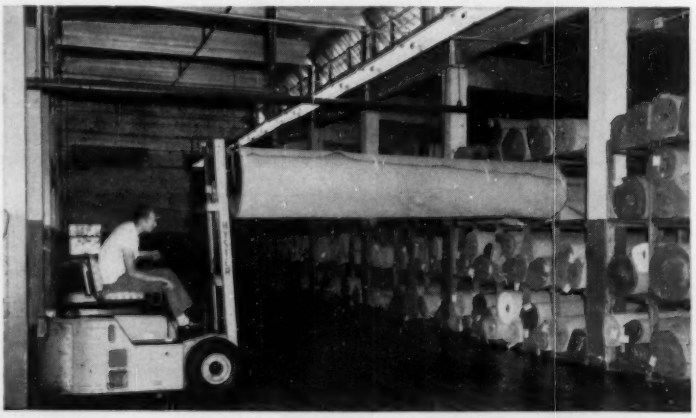
EASY MANEUVERABILITY OF HYSTER QN-20 LIFT TRUCK (2,000 lbs) with Load-Grab Job-Handling Attachment is demonstrated as it unloads bales directly from boxcar.

HYSTER DEALERS GIVE YOU ALL 3

1. PLANNING. Your Hyster Dealer will plan your materials handling operation from scratch — or will analyze your present system to see if it can be improved.

2. THE RIGHT TRUCK for *your* job from Hyster's complete line of industrial trucks (1,000-30,000 lbs) and over 100 job-attachments.

3. THE RIGHT SERVICE—ample spare parts stock, shop facilities, factory-trained mechanics and an efficient field service that keep your Hyster lift trucks going on your job, wherever your job might be located. Hyster trucks are noted the world over for their low downtime.



HYSTER QN-20 LIFT TRUCK with special roll handling attachment expedites movement of 9, 12 and 15-foot widths of carpet rolls. Carpet is cut to length directly on this polished floor. Hyster pneumatic tires are easy on floors.

HYSTER

HYSTER COMPANY

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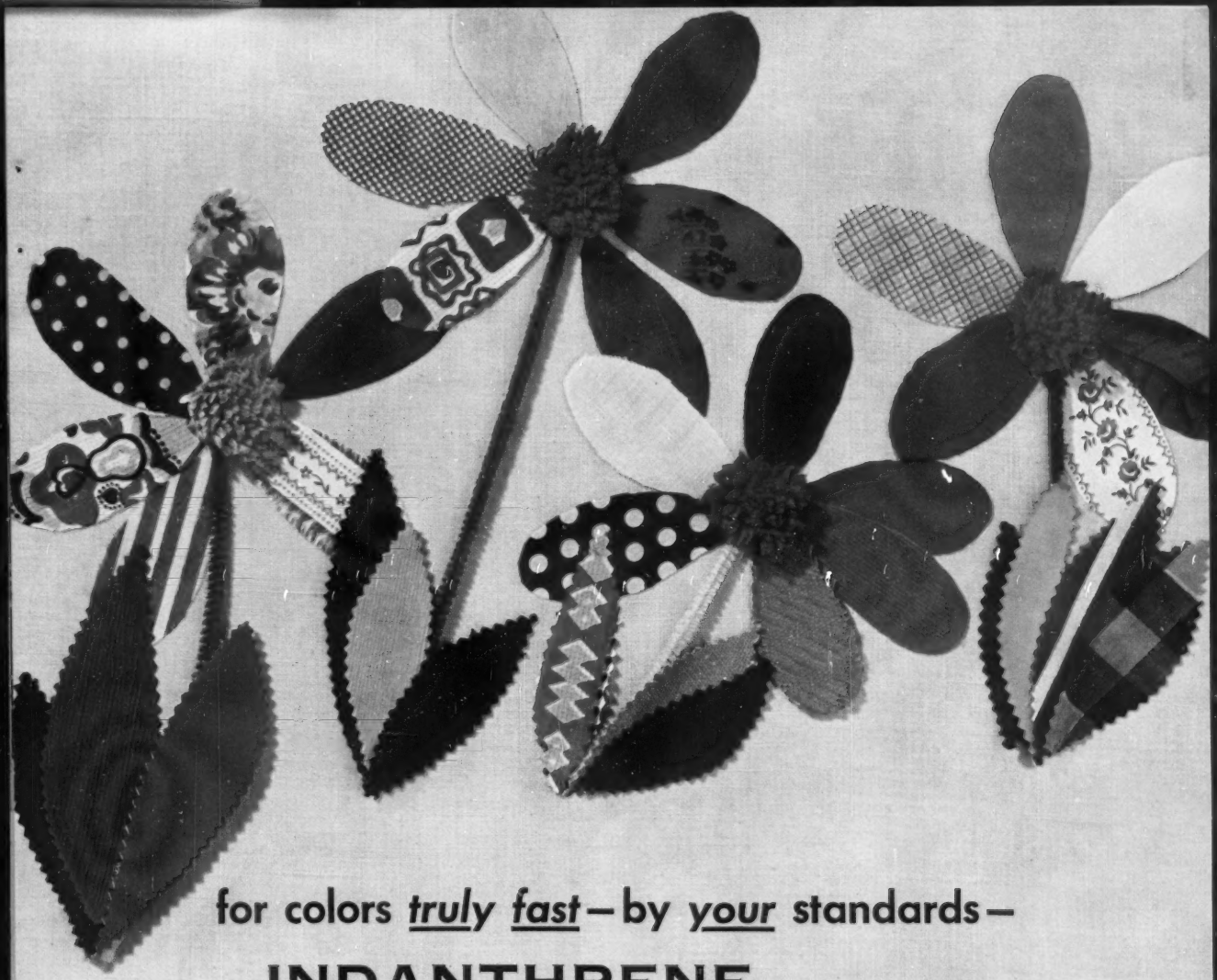
1010-57 Myers Street.....Danville, Illinois
Hyster N.V. .....Nijmegen, The Netherlands

FOUR FACTORIES: Portland, Oregon; Danville, Illinois; Peoria, Illinois; Nijmegen, The Netherlands.



for colors *truly fast* – by *your* standards –

INDANTHRENE® VAT DYES

Whatever the use for the fabrics you dye or print—for clothing, upholstery, draperies, floor coverings, awnings, etc.—the unavoidable demand is that they shall be fast-to-light, fast-to-washing. Your customer's business is safeguarded, when you use vat colors... Indanthrene Vat Dyes have been the standard of the industry for more than 50 years.

From a single source, you draw on the widest color range available. Moreover, to be certain of meeting any requirement you establish, these colors are standardized in as many as six different physical forms...

- "WP" brands—dispersible powders for pigment padding and package dyeing
- "A Pdr." brands—full strength undispersible powders
- "Suprafix Paste" brands—non-drying, non-freezing, fast-fixing pastes for printing
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- "Paste" and "Dble. Paste" brands—dispersed pastes for dyeing

and now—

- "Infra Paste" brands—finer milled to afford instant and complete dispersion—speck-free in lighter shades—new, trouble-free ease of working

Consider the strategic location of our warehouses and laboratories to meet your immediate needs. Call upon our Technical Service Department for assistance in any color or color-matching problem. We invite your inquiry.

From Research to Reality

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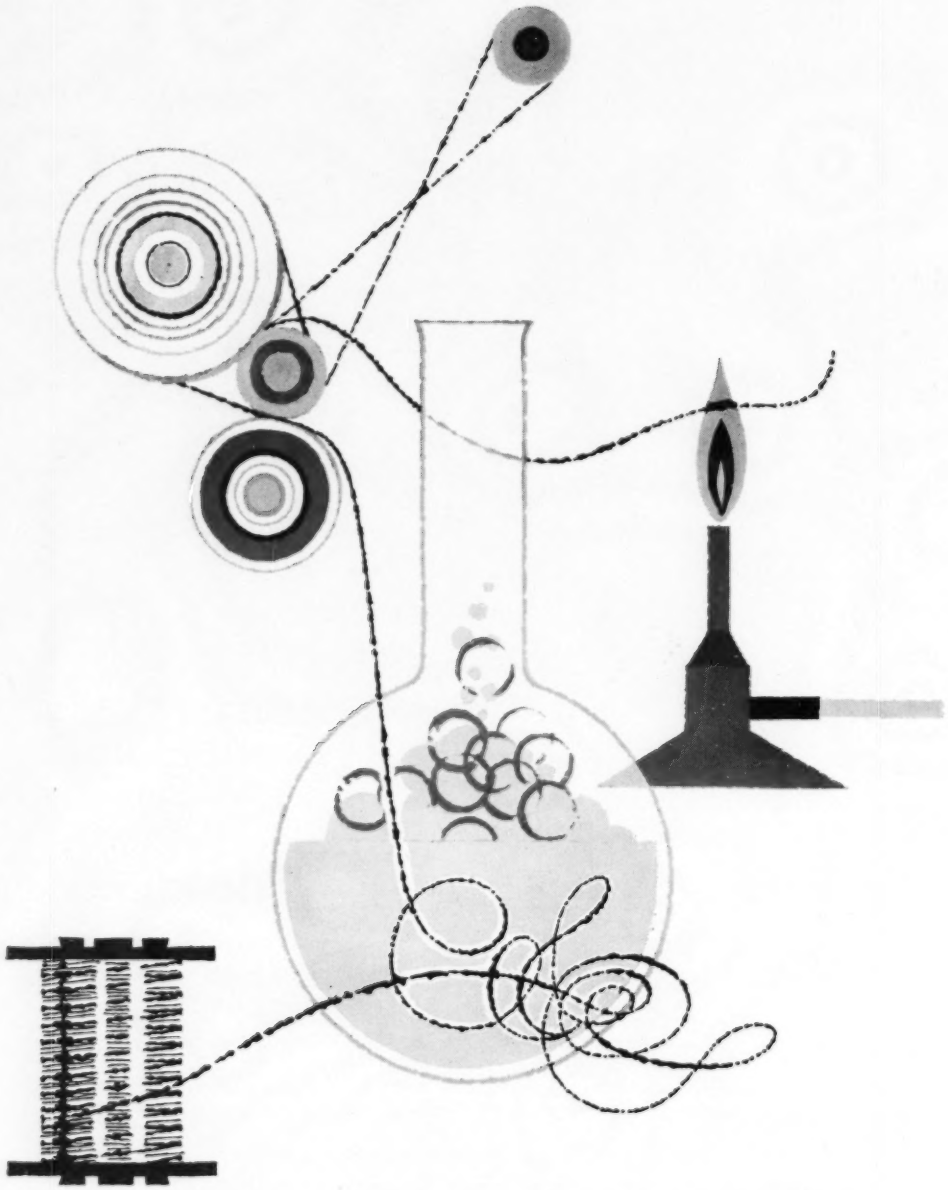


The thread of the story is LUREX®

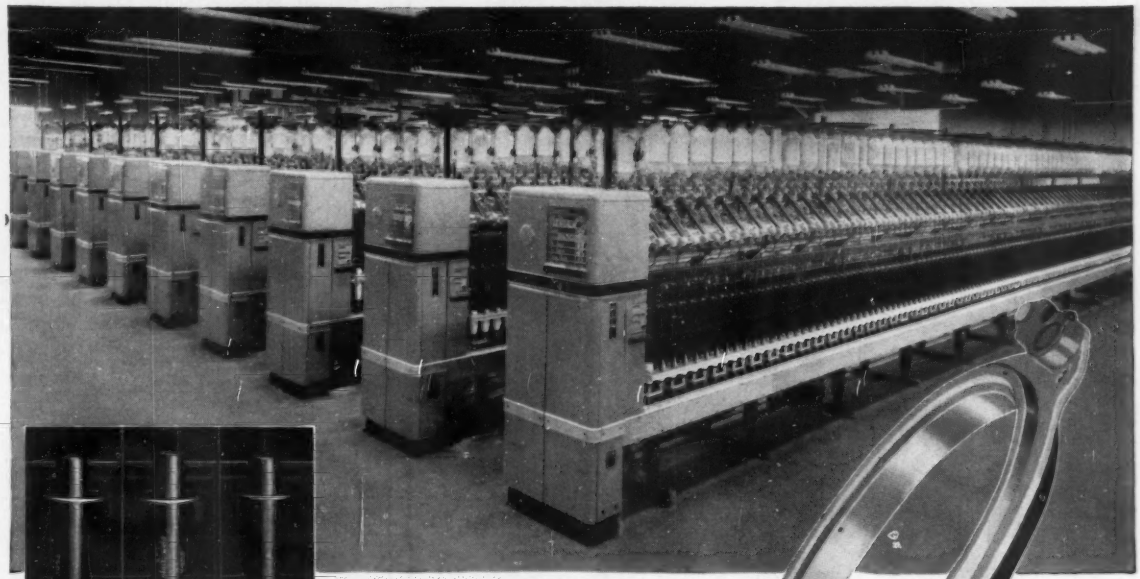
...and in finishing techniques, it's a story of exceptional adaptability. Lurex and Lurex MM (made with Mylar* polyester film) allow for a wide latitude in finishing and have a great potential range that offers many new creative possibilities for the imaginative fabric designer. This quality of versatility has been built *into* these yarns. Beyond that, the entire Dobeckmun staff is experienced in this field and can give expert advice on every problem encountered in finishing. You have everything to gain by getting in touch with the Dobeckmun representative in your local area. Lurex and Lurex MM, non-tarnishing metallic yarns made only by the Yarn Division of ...

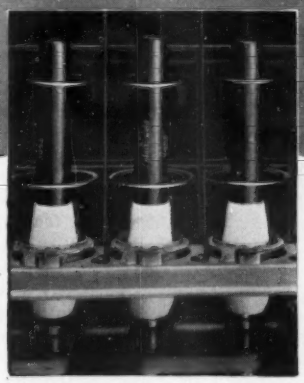
*Mylar is a registered DuPont trademark

The Dobeckmun Company, Cleveland 1, Ohio • New York: 350 Fifth Avenue • London • Amsterdam

Boston: 43 Leon Street • Philadelphia: 1801 W. Cheltenham Avenue • Charlotte, N. C.: 221 S. Church Street • Chicago: 330 S. Wells Street

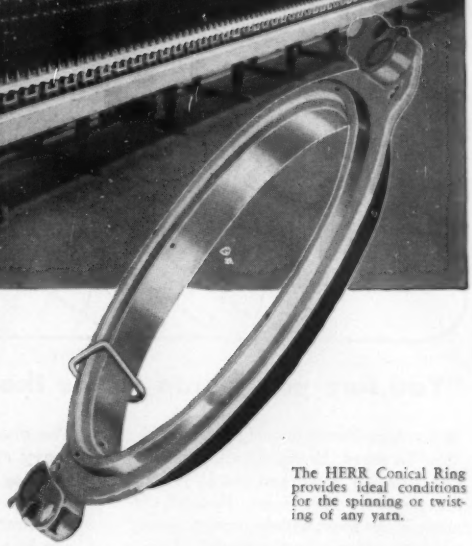
DELAWARE MILLS





Says Mr. William C. Appleton, President of Delaware Mills, Inc., "We are well satisfied with our HERR Conical Rings both on spinning and twisting."

Herr Conical Rings are used on these new Saco-Lowell GWALTNEY Spinning Frames. They are also used on Delaware Mills — Universal Winding Company 10B Twisters.



The HERR Conical Ring provides ideal conditions for the spinning or twisting of any yarn.

Produce High Bulk Orlon at Increased Speeds and with Improved Quality by Using . . . .

HERR CONICAL RINGS

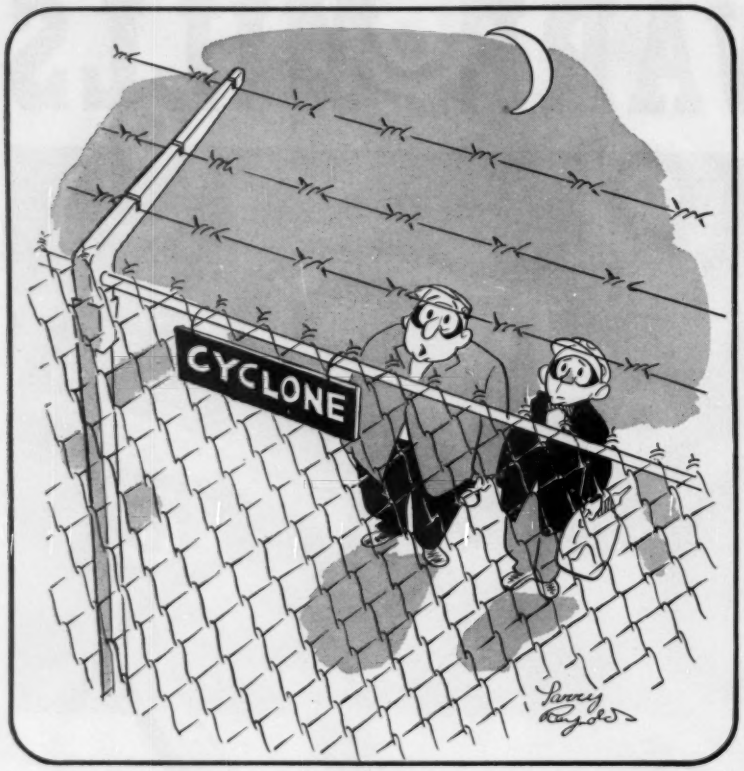
Equip with HERR Conical Rings and begin to enjoy these profit making features. You can speed up production, improve quality and lower costs with HERR Conical Rings. You'll gain too, many other advantages. They stop yarn breakage, permit heavier doffs, produce smoother yarns and reduce fly. You'll enjoy cleaner yarn because oil is not thrown off. Frames and room floors stay cleaner. Travelers last longer because oil is carried in capillaries to ring surfaces. Maximum spindle speeds are achieved.

Learn more about these wonder rings. Write today for descriptive literature.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON AND BLENDED YARNS OF ALL TYPES

HERR MANUFACTURING CO., INC.

310 Franklin St., Buffalo, N. Y.



"You *sure* you wanta tackle that Cyclone Fence?"

● Cyclone Fence is designed with the thief in mind. Every detail of its fine construction is worked out to *protect* the property it encloses. Result? Cyclone is the most widely used property protection fence in the world.

You *can* buy cheaper fence than Cyclone, but it will cost more in the long run. Cyclone contains nothing but brand-new, top-quality material.

The chain link fabric is woven from heavy steel wire — galvanized *after* weaving to prevent cracks that encourage rust. Erection is handled by full-time, well-trained experts, so you can be sure of a fence that stays taut and trim.

Cyclone engineers will be glad to help you solve your fencing problems. Meanwhile, *send for the free booklet.*

CYCLONE FENCE DEPT., AMERICAN STEEL & WIRE DIVISION, UNITED STATES STEEL CORPORATION
WAUKEGAN, ILLINOIS • SALES OFFICES COAST-TO-COAST • UNITED STATES STEEL EXPORT COMPANY, NEW YORK

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Cyclone is the trade-mark name of fence made only by Cyclone. Accept no substitute.

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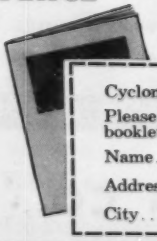
Our informative booklet is filled with photographs, drawings and graphic descriptions of different styles of fence and gates for the protection of property. Whether you're interested in a few feet of fence or miles of it, you'll find this booklet worth your while. Send for your copy. It's free.



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Please mail me, without charge or obligation, a copy of your booklet.

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USS

UNITED STATES STEEL

What the TEXTILE MILLS are doing

(Continued from page 60)

McCall Manufacturing Co., is vice-president; and R. C. McCall, Jr., treasurer of the McCall company, is secretary. A modernization and expansion program has already been launched. Miller S. West continues as superintendent.

In January of 1956 it is expected that a subsidiary of **Harriet & Henderson Cotton Mills** will go into operation at Henderson, N. C. Manufacturing low grade yarn from waste obtained from the local cotton mills, the plant will employ about 50 people, the announcement indicated. A building to house the operation is now under construction.

Herald Piece Dye Works, Inc., is the new name of Royal Dyeing Co. of New York City. Along with this, it was announced that the company has moved from 316 East 61st St. to 332 East 28th St.

The first of one hundred and fifty 400-needle and 474-needle seamless hosiery machines scheduled for installation at **Holt Hosiery Mills, Inc.,** Glen Raven, N. C., are now in production, and others are scheduled to arrive on a monthly basis until the program is completed and in full operation in 1957. Production of approximately 3,000 dozens of seamless hosiery weekly is expected when all of the machines have been installed.

Holyoke Fabrics, Inc., which moved from Holyoke to Chicopee, Mass., several years ago, have recently bought a mill building in Holyoke and are moving back.

Millstone Spinners, Inc., is the new name of **Williams & Dole, Inc.,** Hillsboro, N. H.

Four-hundred-needle hosiery will be produced on 200 machines in a mill being established in Hollywood, Fla., by **La Mode Hosiery Corp.** of New York City.

Citizens of LaFayette, Ga., bought $100,000 worth of stock to help reopen the LaFayette Cotton Mills, which had been shut down since July of 1954. Two-thirds of the stock is owned by J. W. Valentine Co. of New York, who formed a new corporation to begin operations as **LaFayette Mills, Inc.,** on Aug. 17 of this year. Darrell E. Knox of West-

MONSANTO TEXTILE TALK

RESLOOM* gives fabrics a beauty treatment that doesn't wash out!

DRESS: "EVERGLAZE" COTTON BY SPORTWHIRL

HAND AND APPEARANCE ARE PERMANENTLY IMPROVED WITH MONSANTO'S MELAMINE RESINS

More and more mills are turning to Resloom to finish cottons and wools, pure synthetics and blends.

Resloom-treated fabrics have superior hand, improved tailoring properties, quality feel and appearance. But even more important, they retain their freshness and newness after countless washings or dry cleanings.

That's because Resloom HP and M-75 are *melamine* resins, specially formulated by Monsanto for maximum durability. They do not coat the fabric. They are deposited inside absorbent fibers and within the weave of fabrics made of synthetics. They remain there for the life of the fabric.

Only small amounts of Resloom are required. Melamine is less affected by laundering and cleaning than any thermosetting resin. It has remarkable water-, alkali- and solvent-resistance.

Though extra hard, Resloom resins do not create a harsh hand when the fabric is properly impregnated. They can create a wide variety of handling characteristics from soft and full to firm and crisp.

Treatment with Resloom develops excellent crush resistance, dependable shrinkage control and novel surface textures. A Monsanto representative will be glad to work with you on technical problems relating to special finishes. Write Monsanto Chemical Company, Plastics Division, Dept. TI-10, Springfield 2, Mass.

*RESLOOM: REG. U. S. PAT. OFF.

It pays to finish fabrics with durable

RESLOOM *MELAMINE RESINS*

MONSANTO

Serving industry . . . which serves mankind

EPI BOBBIN

At 15,000 RPM
Balance is Vital

Todays winding and twisting bobbins for Nylon and other tenacious yarns run up to 15,000 RPM . . . almost double the top speeds of 10 years ago. At these tremendous speeds a bobbin which is not properly balanced can become a very expensive investment.

Balance is vital because even the tiniest variation in materials, machining, or assembly results in undue spindle and machine wear, and in uneven wind. Since much of this damage is done before the defect becomes noticeable to the naked eye, it will pay you to standardize on EPI Bobbins, because every EPI Bobbin is dynamically tested and balanced before it is shipped.

Write, wire, or call for full information on how the EPI Bobbin saves on spindle and machine maintenance and produces better packages.

STRENGTH

Concentric construction and the patented* EPI Expanding Lock Ring Assembly give EPI Bobbins unexcelled strength to resist the crushing force of tenacious yarns.

New England Representative: J. H. Windle, Jr., 231 S. Main St., Providence, R. I.

*U. S. Patent 2,625,343

ENGINEERED *Plastics*
INCORPORATED
Gibsonville, North Carolina

What the TEXTILE MILLS are doing

field, N. J., is president. Vice-president and treasurer is W. A. Enloe, Jr., and secretary is George P. Shaw, both of LaFayette.

Mill No. 46 of the former Arlington Mills group in Lawrence, Mass., has been purchased by **Malden (Mass.) Spinning & Dyeing Co.** as part of an expansion program. According to the announcement, three floors of the four-floor building will be utilized eventually. Aaron M. Feuerstein will be general manager of the Lawrence plant, the announcement indicated.

Manufacturing Enterprises, Inc., is expected to establish a woolen dyeing plant on a six-acre plot of land in the eastern part of the city of Sumter, S. C.

Production of 3,500 to 4,000 pounds of yarn per month is the goal of the recently completed throwing plant of **Mauney Hosiery Mills, Inc.,** Kings Mountain, N. C. It is understood that a large percentage of the yarn processed in this plant will be converted into stretch yarn for consumption in the Mauney company's knitting mills.

A $4,000,000 modernization program is under way at **Monarch Mills** with plants at Union and Lockhart, S. C. When the work is finished the latter part of this year, these three plants of the Deering-Milliken group will be the corporation's "large package" mills, with a total of 171,500 spindles and 4,500 looms.

Carpet backing for the tufted textile industry is to be produced by a new Greenville, S. C., manufacturer known as **Palmetto Weaving, Inc.,** according to W. O. Cathcart, president.

An 8,000 sq ft addition to its mill in La France, S. C., has been completed by **Pendleton Manufacturing Co.,** a subsidiary of La France Industries, Inc.

Quilted Fabrics Co., Inc., Lawrence, Mass., is a new organization occupying a portion of the former Arlington Mills. Max Monge is superintendent.

Its first major expansion since the 1930s has been announced by the management of **Rhodes-Rhyne Mfg. Co.,** Lincolnton, N. C. A 15,000 sq ft addition and installation of 3,000 to

FOAMGLAS®

the cellular, stay-dry insulation

"We licked our condensation problem because FOAMGLAS insulation stays dry in 64% humidity!"

states Donald Purrington, Supt. of Engineering, William Skinner & Sons, Holyoke, Mass.

Freedom from condensation is vital to quality control in the Holyoke, Massachusetts mill of William Skinner and Sons . . . home of world-famous Skinner silks and satins. The constant efficiency of *stay-dry* FOAMGLAS roof and wall insulation helped lick their condensation problem.

Mr. Donald Purrington, superintendent of engineering at the Holyoke mill relates: "The everchanging New England weather and high inside humidities made condensation a serious problem. That problem doesn't exist in our new FOAMGLAS insulated mill, built in 1948.

"Seven years' service has proved to us that FOAMGLAS stays dry for constant insulating efficiency—despite the 64% humidity we must hold for best loom operation. We get precise temperature-humidity control needed to prevent condensation, and have had no insulation replacement."

Mr. Purrington concludes: "In a high moisture situation like ours, it would be a definite mistake to use an insulation with less than the fully moisture-proof quality of FOAMGLAS!"

Take a tip from Skinner! Solve *your* insulating problems with FOAMGLAS, the cellular glass insulation that *stays dry* to give you long-lasting insulating efficiency. It's strong, fireproof and rot-proof, too. Send today for a sample and our latest literature describing the use of FOAMGLAS to insulate: (1) roofs, ceilings, walls and floors; (2) cold storage spaces; or (3) piping, tanks and other equipment. Indicate your specific interest.

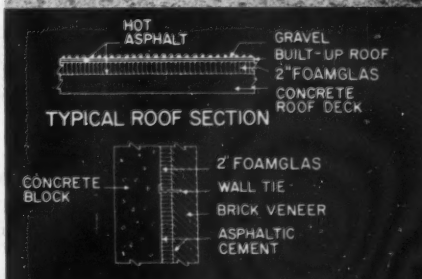
Pittsburgh Corning Corporation

Dept.AG-105, One Gateway Center
Pittsburgh 22, Pennsylvania

In Canada: 57 Bloor St. W., Toronto, Ontario

Mr. Purrington is shown on the FOAMGLAS insulated roof of Skinner's Holyoke Mill. He reports: "The unusually high strength of FOAMGLAS eliminated all possibility of damage from roof traffic. Its effectiveness has exceeded our expectations."

Engineers: Lockwood Greene Engineers, Inc., Boston, Mass.



TYPICAL ROOF SECTION

TYPICAL COREWALL SECTION

Union Special®

INDUSTRIAL SEWING MACHINES

Interested?

Helpful, informative bulletins on the manufacture of many machine sewed products are available to readers without obligation. If you are interested, let us know and we will send bulletins requested to you.

BULLETIN NO. 250 "The Manufacture of Men's Dress and Sport Shirts" — Profusely illustrated 6-page folder describing the most efficient way to manufacture men's shirts. Includes keyed diagram of sewing operations plus drawings of seams and stitches.

BULLETIN NO. 251 "Sewing Operations on Service Garments"—Informative listings of recommended equipment for making service uniform shirts and pants. Lists sequence of operations and stitch and seam types.

BULLETIN NO. 252 "Production of Men's and Boys' Shorts and Pajamas"—Bulletin illustrates and describes machines recommended for making woven shorts and pajamas. Contains information on Union Special's Elastic Metering Device.

BULLETIN NO. 253 "Manufacturing Overalls, Coveralls, Dungarees, and Westerns"—Six page, illustrated folder describing machines found to be best for this type of production. Simple diagram shows operations involved and back cover shows seam and stitch types used.

BULLETIN NO. 255 "Producing Ladies' Undergarments and Nightwear"—New Union Special bulletin analyzes a variety of designs and presents newest machines recommended for operations on women's slips, panties, and nightwear.

BULLETIN NO. 260 "How to Make Work Gloves"—Six-page folder describes and illustrates machines recommended for work glove manufacture, with illustrated explanation of different seam and finish constructions.

BULLETIN NO. 262 "How to Make Bags"—Economical and efficient production of burlap, jute, and multiwall paper bags is outlined in this folder, with photos of actual seam samples included. Helpful guide chart shows immediately the right machine for any bag manufacturing job.

BULLETIN NO. 263 "Tailoring Men's Clothing"—The art of tailoring men's clothing is described in this brochure. Machine illustrations are accompanied by actual seam sample photos.

BULLETIN NO. 265 "Sewing Women's Wear"—Eight-page bulletin gives a listing of machines recommended for women's outerwear production and samples of the work produced are shown.

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UNION SPECIAL Machine Company
407 N. Franklin St., Chicago 10, Ill.

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Without obligation to me, please send me the bulletins checked.

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☐ 260 ☐ 262 ☐ 263 ☐ 265

Name_____

Company_____

Address_____

What the TEXTILE MILLS are doing

4,000 more spinning spindles are included in the project. Rearrangement of all production equipment is planned.

Three hundred and seventy-six operatives in the grey mill at **Riegel Textile Corp.'s** Trion, Ga., division worked a full year with perfect attendance, a recent announcement indicated. Complimentary letters were sent by the management to each of the employees.

A new 40,000 sq ft plant for the spinning of synthetics is under construction at **Rex Mills, Inc.,** Ranlo, N. C., an Aberfoyle Mfg. Co. subsidiary.

Rhode Island Textile Co. of Pawtucket is planning a southern division in a mill to be constructed in Landrum, S. C. The plant will specialize in the manufacture of braided elastic fabrics.

Riverside Mills, New Bedford, Mass., is a new corporation utilizing a portion of the former Gosnold Mills. It is owned by Harry Altman and Jack Antkies who also own the Atlantic Manufacturing Co. in the same city. The mill is in partial production, weaving rayons.

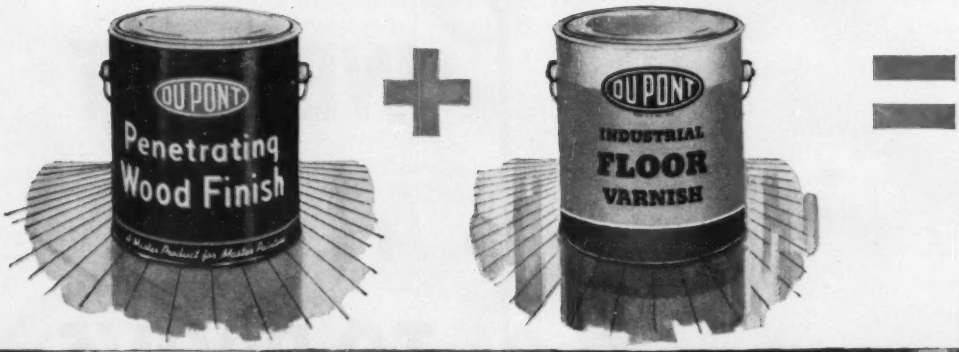
Seagrave (N. C.) Textile Co., Inc., is producing shoe laces in a 1,200 sq ft building formerly occupied by Seagrave Hosiery Mill. Installation of about 80 braiding machines is contemplated.

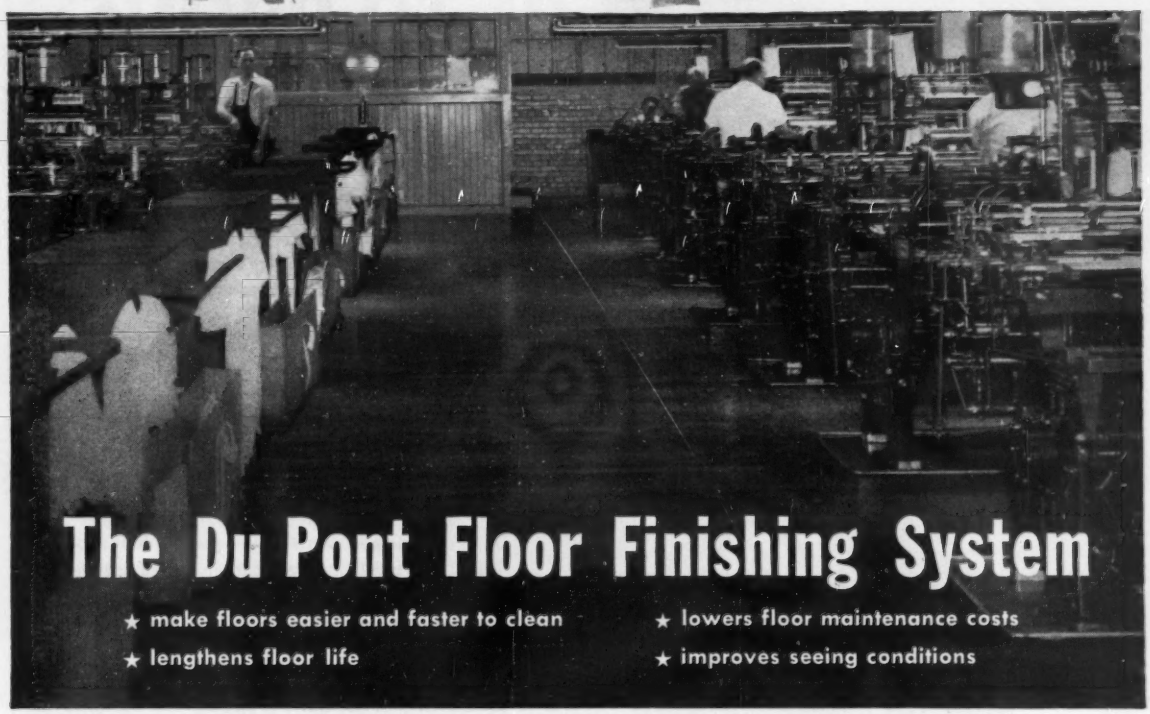
A new 6,000 sq ft building just off Second Ave., N. W., in Hickory, N. C., has been occupied by **Setz-Right Hosiery Mills, Inc.**

Two-inch-wide nylon belting is being produced at **Southern Weaving Co.** in Greenville, S. C., for conversion into automobile safety belts.

The Springs Cotton Mills received the 1955 annual merit award of the National Association of Shirt, Pajama, and Sportswear Manufacturers "in recognition of its outstanding contribution to the progress of the textile apparel industry to consistently maintain integrity and quality of its fabrics; through its courage and initiative in the development of style and design; and through standards with which it has supported its merchan-

(Continued on page 217)





The Du Pont Floor Finishing System

★ make floors easier and faster to clean
★ lengthens floor life
★ lowers floor maintenance costs
★ improves seeing conditions

Mill and plant owners everywhere are enthusiastic about the many advantages offered by Du Pont's Industrial Floor Finishing System. Developed after years of research, this system consists of a first coat of Du Pont Penetrating Wood Finish that thoroughly seals the wood, and a finish coat of high-gloss Du Pont Industrial Floor Finish.

It's an unbeatable team of floor finishes that's bound to give your floors extra protection against hard wear and high humidity.

Practical experience in hundreds of plants has shown the value of the Du Pont Floor Finishing System in reducing over-all maintenance costs, and in providing better seeing conditions and improved housekeeping. To discover what the Du Pont Industrial Floor Finishing System can do for *your* floors, mail the coupon today.

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Industrial Finishes

Chemically engineered to do the job better

Send for Free Literature

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division, Dept. T-510, Wilmington 98, Delaware

Gentlemen:
Please send me, without obligation, information on the Du Pont Industrial Floor Finishing System.

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WE SPLIT A BOBBIN TO PROVE A POINT

VERMONT SPOOLS AND BOBBINS KEEP PRODUCTION HIGH . . . MINIMIZE REPLACEMENT

Uniquely crimped brass bushings . . . found only in VERMONT bobbins—are your insurance against unnecessary time losses . . . your guarantee of longer, more useful bobbin life. Made from hard-rock maple, carefully kiln-dried and lacquered to keep moisture out, VERMONT bobbins are reamed for even greater protection . . . so that the bobbin will not grab the spindle . . . is always smooth running.

Contact your nearest VERMONT SPOOL & BOBBIN representative. He can explain to you how easily and inexpensively you can have your specific needs filled to order . . . to your exact requirements.

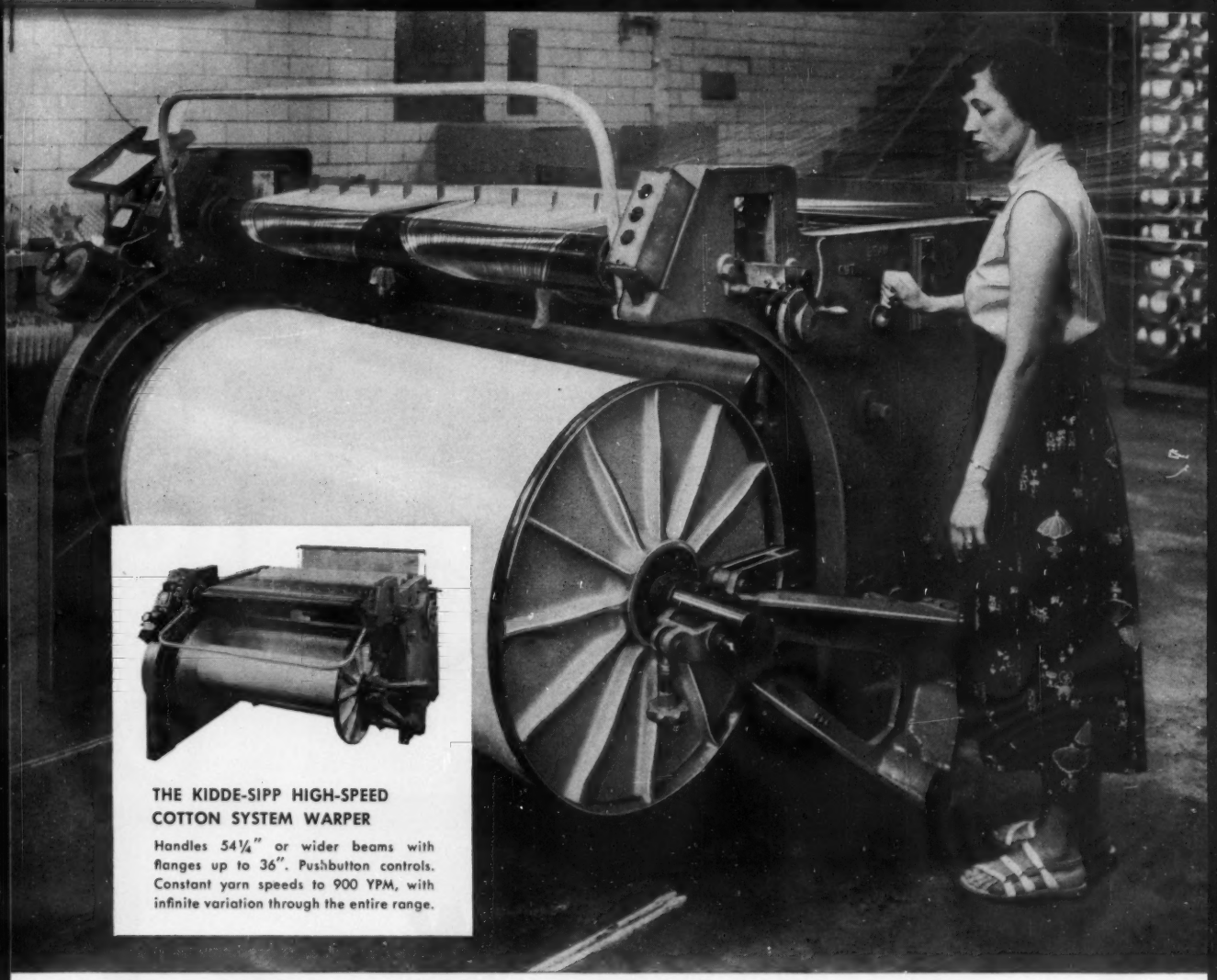
5 Features You Want

- Longer Life
- True, Free-Running
- Brass Bushings
- Skilled Workmanship
- Competitive Price

Represented in the East by Atkinson, Haserick & Co., Boston 6, Mass., and Watson & Desmond, P. O. Box 1954, Charlotte, N. C.

Vermont SPOOL AND BOBBIN CO.

234 SO. CHAMPLAIN ST.—BURLINGTON, VERMONT — *SUPERIOR SPOOLS AND BOBBINS SINCE 1906*



THE KIDDE-SIPP HIGH-SPEED COTTON SYSTEM WARPER

Handles 54¼" or wider beams with flanges up to 36". Pushbutton controls. Constant yarn speeds to 900 YPM, with infinite variation through the entire range.

No Powerful Katrina . . . but she doffs beams without help

No brawn is needed to doff the heaviest beam from a KIDDE-Sipp Warper. The operator pushes a lever and an hydraulic system takes over. It gently swings the 2000-pound beam down and out of the warper, leaving it ready to be picked up and taken to your slashers.

Besides easy doffing the KIDDE-Sipp Warper is also well known for the high quality beams it makes. Its dynamically-balanced presser roll is loaded at each end to provide even pressure without bouncing. Beams are smooth . . . free from ridges and flats. Powerful brakes stop the beam within one revolution and automatically adjust themselves to compensate for the increased load as the yarn builds up. The brakes on the beam, the presser roll and the measuring roll are synchronized to prevent yarn scuffing.

The beam is directly driven from the motor by V-belts. Constant yarn speed is maintained by the D.C. drive. Because there are neither counter shafts nor chains and sprockets in the drive . . . smooth and trouble-free operation is insured.

So, if you haven't yet investigated these high-speed warpers, write today to:

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS
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The word KIDDE is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

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NOW AVAILABLE!

soda ash

(58% light)

BY DOW

Ready for your needs . . .

A high-quality and uniform *soda ash* . . .

Produced by an exclusive new Dow process at Freeport, Texas.

Include Dow in your planning.

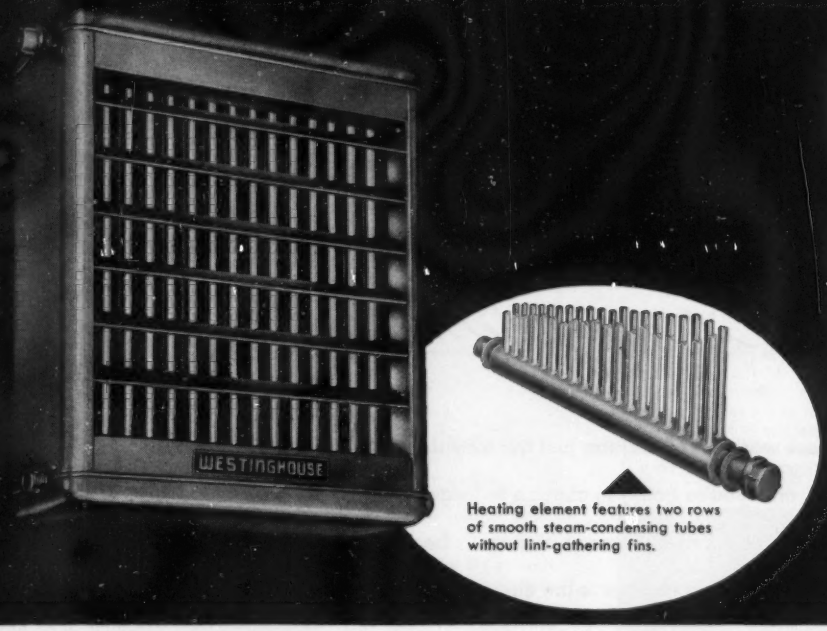
THE DOW CHEMICAL COMPANY, Midland, Michigan

you can depend on DOW CHEMICALS

DOW

Fact:

Westinghouse CLOG-FREE Speedheaters Stop Lint Accumulation in Textile Heating



Heating element features two rows of smooth steam-condensing tubes without lint-gathering fins.

Designed specifically for Textile Mills

With these Westinghouse Speedheaters, lint and dust build-up cease to be a problem. A special non-clogging heating element (see cut) maintains rated heat and air output. This ends shutdowns and maintenance time.

All units include quiet, efficient Westinghouse propeller fans, all-copper heating elements, adjustable horizontal louvres.

Result: instant heat, when and where you want it! You are free of the fuss and bother of frequent lint and size accumulation.

A FULL LINE

Clog-free Speedheaters are available in eight sizes ranging from 23,000 to 120,000 BTUH-Westinghouse Standard Speedheaters—horizontal and downblast—up to 300,000 BTUH. (Ratings at 2 PSI-60° air.) More at higher steam pressures.

ECONOMICAL TO OPERATE

Check on these efficient, economical Westinghouse Speedheaters today! They are adaptable for spot or general heating, comfort or process . . . and inexpensive to run.

MORE FACTS?

Call your nearest Westinghouse-Sturtevant Sales Engineer . . . he's the "Man with the Facts" on heating, ventilating, and electronic air cleaning . . . or fill in the coupon below.

WESTINGHOUSE AIR HANDLING

YOU CAN BE SURE...IF IT'S

Westinghouse

J-80430

Westinghouse Electric Corp.
Sturtevant Division, Dept. 13K
Hyde Park, Boston 36, Mass.

Please send more information on your Clog-free Speedheaters.

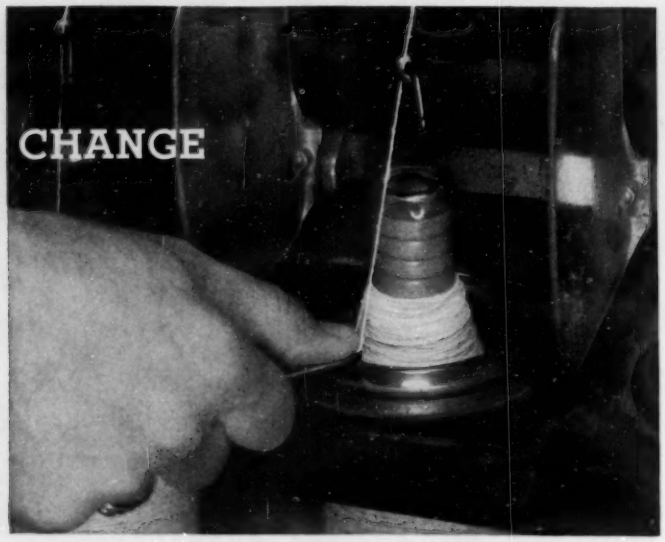
NAME AND TITLE .....

COMPANY .....

CITY ..... STATE .....

A TRAVELER CHANGE

is easy to make



and it may be ALL that's needed

If your work is not running just the way it should . . . or if you're going to change to larger packages or different fibres or blends . . . bear in mind that a traveler change is the easiest change in your whole process. It's an obvious thing to try first. 'Phone your U. S. Representative. He may have a slant that will help . . . he does have the finest travelers produced. All of the U. S. mill background and textile experience is at your service. Call on U. S., count on U. S.

U. S. Representatives are at your service.

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A Style and Size for Every Yarn and Fibre

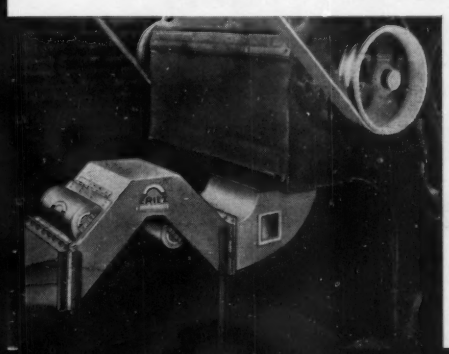
Packaged to Arrive

and Keep Perfectly

OLD IRON PANTS AND THE MAGNET! A lady from yesterday with a metal-ribbed girdle wouldn't be safe next to an Eriez Magnet. She might easily be "hung-up" by the powerful Alnico V action. This idea of herculean power is practically applied in textile processing lines. Magnets remove dangerous tramp iron preventing fires, machinery damage and loss of production in cotton, woolen, rayon and waste mills. *All Eriez Magnets are non-electric, self-contained. They operate without any wires or attachments. Best of all their magnetic power lasts a lifetime. The first cost is the last.*

MAGNETIC IDEAS FROM ERIEZ

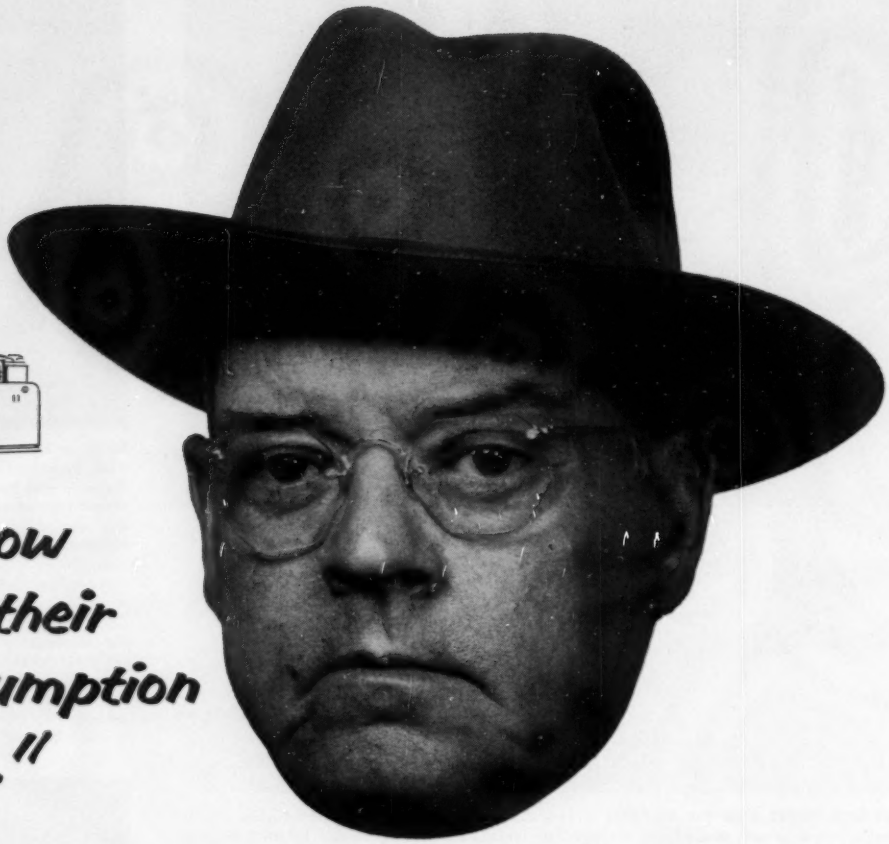
TRAMP IRON CAN'T GET OVER THIS HUMP. Eriez Permanent Non-electric Magnetic Humps offer the ideal method of removing dangerous tramp iron from material conveyed in pneumatic lines. The patented Eriez Hump consists of 2 powerful plate magnets in an enclosed sheet-metal housing. The hump design changes the direction of the flowing material, creating a mixing or tumbling action. This directional change of the moving material allows the magnets to catch and hold spark-producing tramp iron. Eriez Magnetic Humps bear the Associated Factory Mutual Stamp of Approval for installation in textile mills, and are heartily endorsed by insurance companies as a means of reducing mill fires caused by tramp iron. Want more information? . . . request Bulletin 563.



ERIEZ SPIKED-APRON MAGNET SPIKES METAL DAMAGE. Lawrence Garnet Co., Lawrence, Mass., produces garnet specialties of silk and worsted, white worsted and merino. As a precaution against tramp iron damage to the machines, Eriez Spiked-Apron Magnets were installed in the feeder boxes. This step proved highly successful, and the magnets removed large quantities of knitting needles, pieces of spindles, ring travellers, etc., from the processing lines. Previously, any metal such as this would put the machine out of use for days or even weeks, seriously curtailing production. So efficient were the magnets in preventing tramp iron damage, thus saving thousands of dollars, that when the company recently installed new machinery, it would not use it until Eriez Permanent Magnets had been added.

ERIEZ MAGNET IS WATCHDOG FOR THIS FLOCK. Cellusuede Products, Inc., Rockford, Ill., manufacturer of rayon, cotton and hair flock, protects its reputation and costly cutting knives with an Eriez Plate Magnet that pulls dangerous tramp iron from the raw material before it reaches the knife blades. The finished flock, used as a coating material for textiles, paper, metals, etc., and as a reinforcing material to strengthen rubber and plastic compositions, *must* be entirely free of metal contamination. Since installing the magnet, there has been no trace of stray metal, no damage to knives by tramp iron.

Eriez, free booklet "Magnetic Ideas" can help you. Send for it without obligation. Address: Eriez Manufacturing Company, 72X Magnet Drive, Erie, Pa. Or, on your specific request Eriez' factory-trained field men backed by Eriez' laboratory and engineering know-how will be happy to study your particular problem, make a plant survey and offer helpful "Magnetic Ideas".



"Here's how we cut their oil consumption 35%..."

A large cotton mill in the state of Georgia was dissatisfied with their spindle oil—the cost was high *and so was consumption.* Sinclair Lubrication Engineer Lewis Kay was asked for his recommendation.

75 frames isolated...

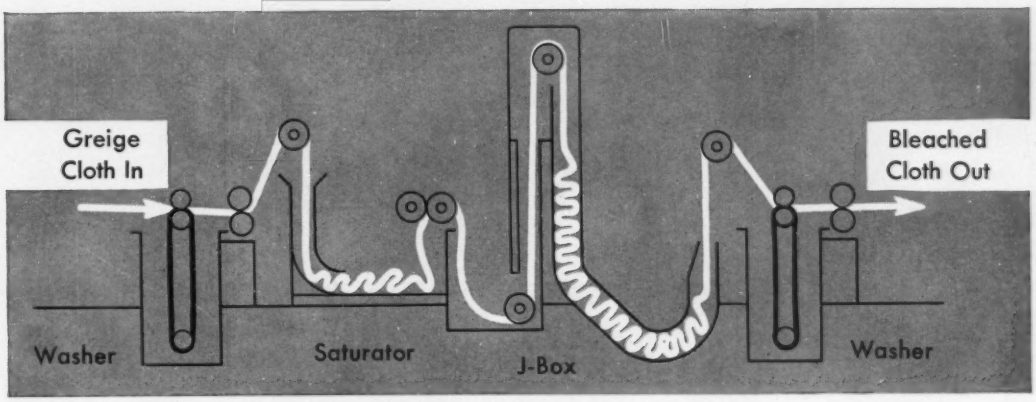
Mr. Kay reports, "I recommended Sinclair LILY WHITE OIL AX which was much lower in price and 25% lighter-bodied than the oil being used. The overseer isolated 75 frames for a test run—and found the lighter oil not only reduced his power load but actually cut oil consumption 35%."

Test compares iron residue...

Mr. Kay continues, "Moreover, comparative lab tests on the used oils showed the competitive oil contained 4 times as much iron residue resulting from wear as LILY WHITE... bolster wear had been cut 75% by this one Sinclair oil."

Why not give a Sinclair Lubrication Engineer the chance to help solve *your* lubrication problem. There's no obligation. Contact your local Sinclair office or write Sinclair Refining Company, 600 Fifth Avenue, New York 22, N. Y.

SINCLAIR LUBRICANTS



OVERSIMPLIFIED?

Not at all! With Du Pont's new one-step single-stage peroxide system

just one pass through one J-box effectively bleaches cotton woven goods

With this latest development of Du Pont practical engineering, boiling out and bleaching are handled simultaneously. This means you can cut over-all bleaching costs by as much as 20%—and still produce results equal in every way to those obtained with the older multi-stage systems.

Du Pont's compact new system enables you to maintain present production levels with half the equipment, half the floor space . . . or double production without additional equipment. Cloth distortion and abrasion from handling are minimized, and savings of up to 50% in labor, steam, water and power are quickly realized.

We'll be glad to show you how your present bleaching system can be modified to operate on this new *one-step* principle. Or, if you're planning to install new equipment, Du Pont bleaching experts will gladly show you how the Du Pont process can substantially cut the cost of your initial investment.

NOTE: *Du Pont does not build or sell bleaching equipment. However, Du Pont systems are available* now *from leading equipment manufacturers.*

Send coupon for details

DU PONT PEROXIDES

ALBONE® hydrogen peroxide, 35% and 50%

PERDOX® sodium borate perhydrate

SOLOZONE® sodium peroxide

Sodium perborate tetrahydrate

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☐ Please send full information about the new Du Pont single-step continuous bleaching system.

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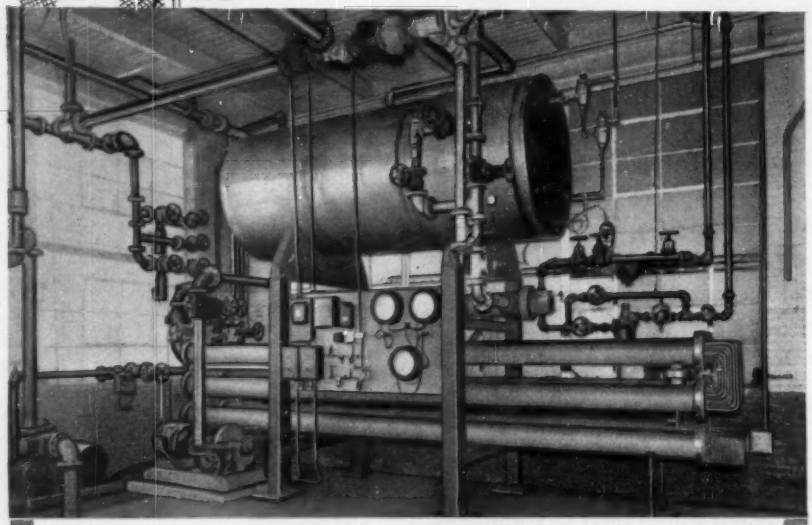
Bready System of Waste Heat Recovery and Engineering

GIVE YOU

Guaranteed Recovery

TO WITHIN 10 DEGREES OF WASTE WATER TEMPERATURE

Competent engineers in the textile field are recommending the Bready system of waste heat recovery. The Copland installation is one of these. Like hundreds of other Bready systems now serving users, it is paying big dividends in recovering waste heat, saving fuel and reducing boiler load or making overloaded boilers big enough. Not an ordinary heat exchanger, Bready systems of waste heat recovery are specifically designed to fit your plant's needs — performance is 100% guaranteed!



COPLAND ANOTHER BREADY WASTE HEAT RECLAMATION ACHIEVEMENT

The Bready installation at Copland Converting & Finishing Company, Burlington, N. C., was engineered to solve a series of problems in cooperation with their staff.

The installation consists of a Bready waste heat reclaimer in combination with a Bready system of hot water heating and temperature control.

A. The system is giving maximum possible heat recovery from waste water up to within 10 degrees of waste temperature.

B. The system gives positive controlled, high volume delivery of heated water to process and tempered hot or cold water at the specific temperatures needed for individual or variable process operation.

C. Engineering, heat recovery and value, trouble-free operation and controlled specific temperature delivery were all firmly guaranteed.

Management at Copland states all guarantees were met and substantial cost reductions and greatly improved overall operations have been effected to their full satisfaction.

(The performance data was supplied by Mr. George H. Fowler, of Copland Converting & Finishing Company. His courtesy is deeply appreciated by the Ludell Manufacturing Company.)

If you are interested in substantial cost reductions, or planning expansion or other changes, *be sure to investigate* the Bready system of waste heat recovery and Bready engineering. A request will bring competent, specialized engineering service to consult with you or your consulting engineers — there is no obligation. Write, wire or phone—today!

THESE OTHER BENEFITS

100% Guaranteed!

- **Average fuel reduction or value of heat recovered—35.2%.**
  Average boiler h.p. reduction 34%.
- **Recovery of all heat reasonably available within keeping of capital investment.**
- **Full manual or automatic back-flushing; no tube clogging or plugging.**
- **Heat Reclaimer unit entirely above floor.**
- **No manual cleaning of Reclaimer.**

Ludell

MANUFACTURING COMPANY
5200 W. State Street, Dept. TI • Milwaukee 8, Wisconsin
MANUFACTURERS OF BREADY SYSTEMS OF WASTE HEAT RECOVERY

to avoid shade

variation...

leave it to

*Levelene

When color uniformity is a "must," leading dyers and finishers simplify their problems by utilizing LEVELENE . . . A.A.P.'s 4-way dyehouse assistant. Performance-proved as a Leveling Agent — Penetrant — Dispersant — and active Stripping Catalyzer — LEVELENE may be used for preparing, dyeing or finishing.

You will find LEVELENE particularly well suited in minute quantities as a vat dyeing retardant—in the pigment pad or reduced methods—as well as for vat stripping.

For full details and data tailored to your individual requirements, consult our nearest branch. A.A.P. technicians will be happy to arrange a demonstration at your earliest convenience.

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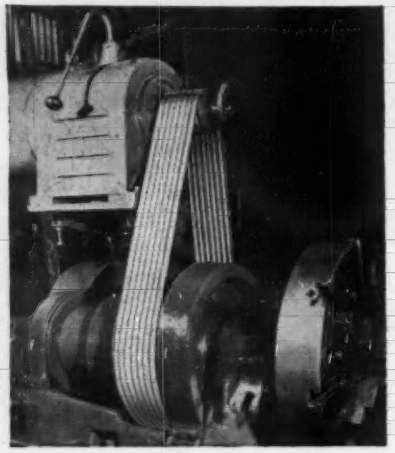
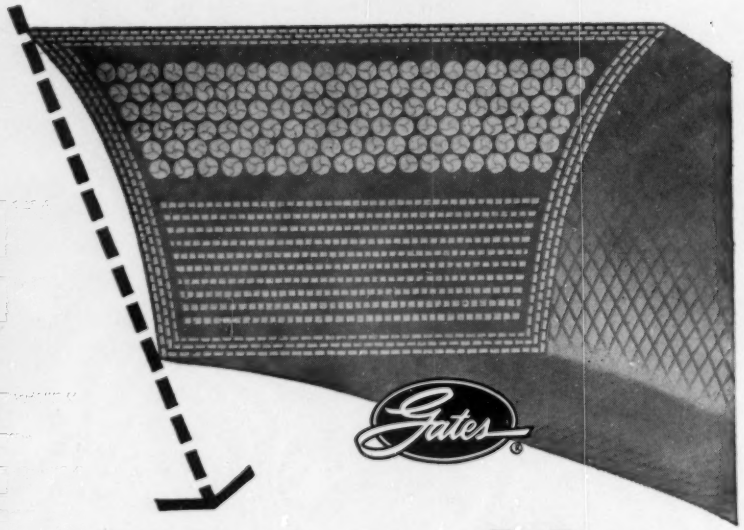
This large lathe was formerly driven by a flat belt which slipped on heavy cuts, stalled and broke tool bits. Savings on broken tool bits alone offset the cost of the drive the first year—and production was increased 25% after the V-belt drive was installed.





concave sides lengthen V-belt life ...cut costs

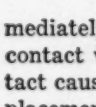
Hundreds of plants that keep track of V-belt drive costs know this: Gates Vulco Ropes . . . the V-belts with *concave sides*...wear much longer and *cost less per year of service.*

Here is the interesting reason why:

When a Gates V-belt bends around the sheave, the *precisely-engineered* concave sides (Fig. 1) fill out and become straight. Thus the sides of the belt make full, uniform contact with the pulley (Fig 1-A).

Naturally, uniform contact distributes the wear *evenly*. And *even* wear means *longer* wear.

Longer wear saves not only on replacement costs; it also saves the cost of down-time... keeps equipment producing.



Simple test proves value of concave sides

Take a straight-sided V-belt (Fig. 2) and bend it. Feel the sidewalls of the belt bulge out as the belt bends. You see immediately that the bulging sides prevent uniform contact with the pulley (Fig. 2-A). Uneven contact causes faster wear...increases your drive replacement costs.

Let the cost-saving longer life of Gates Vulco Ropes contribute to *your* profits. Specify Gates Vulco Ropes—the V-belts with concave sides (U.S. Patent 1813698). The Gates Rubber Co., Denver, Colorado—*World's Largest Maker of V-belts.*

Gates Engineering Offices and Distributor Stocks are located in all industrial centers of the United States and Canada, and in 70 other countries throughout the world.

TPA-54A

GATES VULCO ROPE DRIVES

Textile Industries
for October 1955

News IN BRIEF

Minimum Wage Law Will Raise Hosiery Prices. The new minimum wage law will increase the cost of infants' and children's socks by at least five cents a pair, according to the National Association of Hosiery Manufacturers. Increases in the women's hosiery field and in men's socks are also likely, and in many cases may be greater than in the infants' and children's markets.

ACMI Asks Action on Certificated Cotton. The American Cotton Manufacturers Institute has appealed to the Department of Agriculture to take immediate concrete steps to rectify the current situation of over-classed and over-valued cotton in certificated stock. Describing the situation as "deplorable," the ACMI notes that after a year's consideration of the problem and proposals to remedy it, the classing of such cotton doesn't appear to have improved at all. According to ACMI, the following results are evident: 1) Over-valued and unmerchantable cotton dominates the futures contracts; 2) the price of futures is kept well below the price of spots, thus depriving the entire cotton trade of adequate hedging facilities; and 3) the futures market is more vulnerable to manipulation, either deliberate or accidental, which in no way reflects the true price of American cotton.

MOUSE May Help Textile Industry. Textile manufacturers and others whose production, planning, and sales are geared—either directly or indirectly—to weather prospects may reap benefits in the form of greatly improved long-range weather forecasting from Operation MOUSE [Minimum Orbital Unmanned Satellite of Earth], the U. S. plan to build and launch satellites to circle the upper atmosphere. Experts think that the satellites may furnish scientists

with a better insight into what makes weather and permit them to plot weather changes six months or a year before they materialize. —*National Federation of Textiles Bulletin.*

Factoring Shows Big Increase. The volume of factored goods nearly doubled during the decade following V-J Day, showing an increase from $1,719,000,000 in 1945 to about $3,250,000,000 in 1955, according to an estimate by Charles S. Sargent, Jr., vice-president of William Iselin & Co., Inc. Although factoring started in the textile industry, it has now become an accepted procedure in more than 50 industries.

Investment Per Worker in American Business. The present capital investment required by U. S. business to employ one worker

is $12,500, with an average annual investment of $450 per worker to maintain jobs already in existence. —*Capital Goods Review.*

Canadian Association Helps in Contract Disputes. A new and unique trade association is the Contracts Bureau, Toronto, Ont. Its function is to keep spinners informed of total yarn sales and sales breakdown by member companies so that mills can properly evaluate market conditions in the face of contract disputes with customers.

Cotton Set-Aside Reaches 3 Million Bales. Secretary of Agriculture Benson announces that two million bales of upland cotton have been added to the "set-aside" provided by the Agricultural Act of 1954, completing the minimum set-aside of three million bales required by the Act. Commodities in the set-aside are not counted in the carry-over when price support levels are computed.

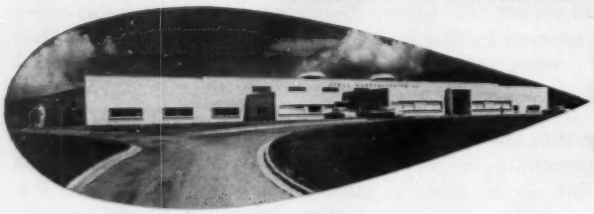
First Commercial Nylon Paper. The first commercial run of paper made wholly from nylon fiber has just been completed by Riegel Paper Corp. The nylon paper is claimed to be almost impossible to tear by hand, to be highly resistant to attack by chemicals and microorganisms, and to have low water absorbency.

Associations Hit Definition of "Full-Fashioned." National Association of Hosiery Manufacturers and National Knitted Outerwear Association, in communications addressed to the Federal Trade Commission, have taken strong exception to the definition of the term "full-fashioned" as it appears in the proposed trade practice rules for the corset, brassiere, and allied products industry. If the rules are approved, the term could be used in connection with a product that "has been so knitted as to conform to the shape of the body," and where "the shaping effect achieved will be retained for the

End of the Line for *Lint*

Bank of Auto-AIRMATS on one of the four air conditioning systems (totalling 138,000 cfm) serving the Stone plant. Filters installed overhead to conserve floor space.

Air conditioning system designed by DEPARX STIMSON, Winston-Salem, N. C.; installed by BUENSOD-STACEY, INC., Charlotte, N. C.



Auto-AIRMAT Filters Assure Lint-Free Air For Stone Manufacturing Company

THE "Creators of Stone's Wear Apparel" made sure that lint in recirculated air would never hamper production of their quality line of petticoats and children's play clothes. They equipped their Greenville, South Carolina plant with AAF Auto-AIRMAT filters—the *only* filters designed to remove lint fibres from the air and clean themselves automatically.

The AIRMAT Media, installed in roll form at top of unit, becomes a moving filter curtain that is re-rolled at bottom with its lint load. Clean media is introduced automatically in sufficient quantity to maintain resistance at proper level—and the lint is wrapped up in the roll for easy disposal.

Don't let lint have the "run of the mill" in your plant—get all the facts about the Auto-AIRMAT. Call your local AAF representative, or write direct for Bulletin 234.

AAF herman nelson

American Air Filter
COMPANY, INC.

American Air Filter of Canada, Ltd., Montreal, P. Q. • 275 Central Avenue, Louisville 8, Kentucky

life of the product." NAHM and NKOA want the term to be restricted to describe garments which are knitted "on a flat bed or bar machine in the course of which flat fabric is shaped in the knitting to conform to the shape of the limb or body."

All TRI Departments to be at Princeton. All departments of the Textile Research Institute will be at one location when the Publications Department moves from New York to Princeton, N. J., this fall. Chief activity of the Department is the publication of the *Textile Research Journal.*

Factor Says European Textiles Are Booming. The European textile industry is back in full swing, with competition getting to be almost as keen as it is in America, according to Fred Meissner, board chairman of Meinhard & Co., Inc., who recently returned from a 10-week trip to the Continent. "The battle for sales is on, and many of the mills are planning to increase their sales to foreign markets. West Germany has already made remarkable strides in developing export sales," said Meissner. "They are doing some interesting things with man-made fibers, and they have modern equipment which enables them to meet our competition," he reported.

Cotton Council in New Home. The National Cotton Council has occupied its own building, the Oscar Johnston Cotton Foundation Building, at 1918 North Parkway, Memphis, Tenn. Formal dedication of the building is set for October 19. The Council's new mailing address is P. O. Box 9905, Memphis 12, Tenn.

Notes on the Canadian Wool Industry. Of Canadian consumption of wool and wool mixtures in 1954, 60.6% was produced in Canada; 93% of imports were from Great Britain. While a certain amount of the decline of the woolen industry in Canada is due to obsolete mills, mill men state that they can't beat the "efficiency of low wages" which is Britain's advantage. Woolen mills were supported in this contention by the Tariff Board's report to the Canadian Minister of Finance, in which a large part of the distress in this industry was attributed to the 50-cents-per-pound maximum duty provided by the Ottawa Agreement. Cited as a basis for this statement was the fact that the effective rate of duty has decreased because of increases in cloth prices. Also cited was the effect of reduced demand for woolen goods. No action has been taken on this report, woolen mills are in difficulty, and "further mortalities would seem inevitable."

Georgia Mills Chalk Up Safety Record. Thirty-nine of Georgia's approximately 175 textile mills worked a combined total of 9,790,287 man-hours without a lost-time accident during the first quarter of the seventh annual textile safety contest sponsored by the Cotton Manufacturers Association of Georgia. The frequency rate for accidents in Georgia mills is now 6.067 per million man-hours, compared with 8.248 per million man-hours in 1949, when the contest started. The national safety average for all types of manufacturing is 11.5 accidents per million man-hours.

NIRC Gets Award for Research Project. The National Institute of Rug Cleaning has been presented an award by the American Trade Association Executives "for having rendered outstanding service to the industry it represents as well as to the American public," in its research project to improve methods of on-location cleaning of tufted cotton carpeting.

Micronaire OK for Cotton Arbitration. The International Cotton Federation has decided that the Micronaire tester for determining fiber fineness is now sufficiently established to be used for arbitration. The Federation recommends that authorities in various countries prepare to arbitrate cotton on Micronaire readings.

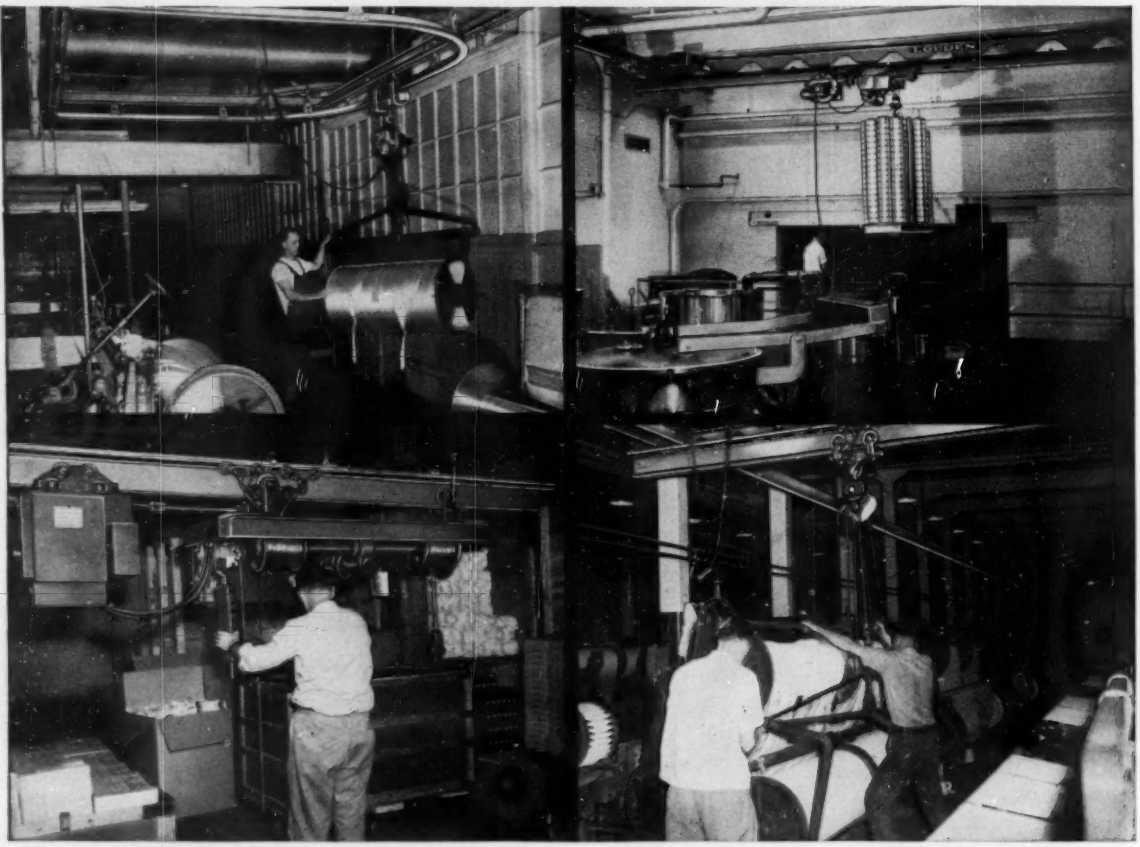
News in Brief

Fewer Cotton Bales Stenciled. Ginners are abandoning the practice of marking cotton bales with stencil ink, according to the National Cotton Council, as a result of mill complaints of stained cotton. Gin supply firms report a marked reduction in stencil ink purchases during the 1954-55 season, and warehouses and railroads reportedly use the inks only for those bales intended for export.

PTI Contributes to Overseas Relief. The Philadelphia Textile Institute has contributed 100 yards of student-made cotton and woolen materials to be sent to South Vietnam through "Operation Brotherhood," sponsored by the United States Junior Chamber of Commerce and the International Rescue Committee.

Georgia Wants More Textile Graduates. The textile mills of Georgia, through The Textile Education Foundation, Inc., have initiated a plan to make more trained graduates available to the industry. Citing the fact that the A. French Textile School at Georgia Tech is currently operating at only 50 per cent of capacity, the Foundation has launched a program of part-time mill employment for students, wider participation by mill executives in "Career Days" in local high schools, financial aid to local schools, more scholarships, vocational guidance, mill visits, talks by members of mill technical staffs, and an extension of financial assistance by mills, including loans and outright grants.

You can do it better with Louden engineered monorail!



Let Louden's long experience solve your textile handling problems

Louden pioneered monorail handling. This longest and broadest experience with the most adaptable and most flexible of all materials handling methods naturally offers many *extra* benefits to men seeking answers to any handling problems. Shown above are Louden Monorail handling equipment in four of the nation's leading textile mills. On performance, Louden is the preferred choice of many of this country's most progressive operators. Benefit by Louden experience and success on YOUR next handling problem.

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Labor Notes. An employer, in exercising his right of free speech, may not only indicate his preference for an incumbent union over a rival seeking to replace it in an NLRB election, but may also point out that the rival might not obtain as good a contract as the employees now have, according to a recent NLRB ruling. * * * The Minnesota Supreme Court has affirmed the power of state courts to enjoin mass picketing and violence under the police power of the states, even where such conduct occurs in a dispute affecting interstate commerce and constitutes a violation of the Taft-Hartley Act. * * *. NLRB has ruled that a company president's interview with individual employees at their work places prior to an NLRB election, in which he urged them to vote against a union but made no threats or promises, constituted legitimate electioneering. * * * NLRB General Counsel has dismissed a union's refusal-to-bargain charges, based on an employer's refusal to agree finally on any matters until the union presented all of its demands. Union had insisted on settlement of nonwage items before presenting its wage demands. * * * NLRB's look-at-the-books doctrine has been rejected by the Court of Appeals for the Fourth Circuit in denying enforcement of a Board order which would have required an employer to disclose manufacturing costs and other financial information demanded by a union bargaining for a wage increase.—*NAM Law Department.*

Cotton Federation Builds Spinning Test Mill. The International Cotton Federation is building a spinning test mill at Alexandria, Egypt. It will be available to buyers of Egyptian cotton for testing the spinning value of their cotton. Mill is expected to be in operation early in 1956.

Search for Better Bale Covering Continues. About 6000 bales of cotton are being test-wrapped with various materials and put through regular commercial channels during the 1955 harvest season, in a test sponsored by the National Cotton Council's Industrywide Committee on Cotton Quality. Wrapping materials used in the test include nonwoven cotton fabrics, vinyl and polyethylene films, burlap laminated with various materials, corrugated boxes, and several kinds of paper, including X-crepe. Bales will be put up in both standard and high density, and tests will be set up in various parts of the Cotton Belt.

Textile Information Service Moves. New address of the Washington, D. C., office of the Textile Information Service is Room 505, 1145 19th St., N.W.

Jute Demand Increases. According to trade reports, the increased demand for tufted rugs and carpets has brought the industry's production to its highest level and has created a strong demand for wide, seamless jute backing which comes in 9- to 15-foot widths and is used as a foundation for the tufting process. The jute backing industry started only four years ago with the conversion of a few looms to wide widths. Now 600 looms are running around the clock and 200 more are on order. With these new looms, it is estimated that by mid-1956 production of jute backing for rugs will exceed 50 million square yards annually.—*Textile Organon.*

Navy to Close Textile Plant. The ropewalk at the Naval Shipyard, Boston, Mass., is among the 14 facilities which the Department of Defense has announced will be closed in compliance with the 1956

Self-Service Company Store

IN THE company store of Bruck Mills Limited, Sherbrooke, Quebec, the selling operation has been streamlined by installing the self-service bins shown in this photograph.

Doubled-and-rolled piece goods are displayed in the racks, and customers can inspect the assortment without crowding. Selections are picked from the bins and taken to the cashier for cutting, wrapping, and payment.—*Staff.*

STERLING TNA·5

New Textile Dyeing Reagent

6 Ways Better in Your Mill!

1. Efficient, economical replacement, pound for pound, for anhydrous sodium sulphate in a neutral dye bath.

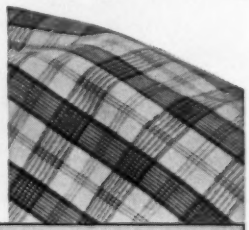
2. Neutral . . . readily soluble in either cold or hot water.

3. Can be used in either the dry granular form or automatically converted to fully-saturated brine with the TNA-5 Dissolver.

4. Eliminates dye precipitation, produces a good color yield, level shades and a soft finish.

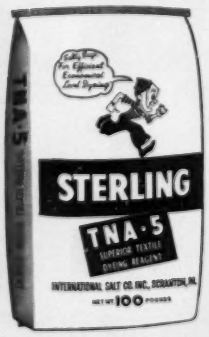
5. Can be used in a neutral dye bath when dyeing cotton, rayon, wool, or any blend of these fibers . . . in the staple, yarn or piece goods.

6. Especially effective with Direct or Naphthol dyes, it produces excellent crock fastness and clear, brilliant colors.



FOR FINER DYEING . . . AT LOWER COSTS

Order Sterling TNA-5 Today! 100-lb. bags or bulk. For more information, send this coupon.



INDUSTRIAL DIVISION
International Salt Company, Inc.
Scranton 2, Pa.

☐ Please have a representative call.
☐ Please send additional TNA-5 information.

Name_____

Company_____

Address_____

City_____ Zone_____

State_____

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INTERNATIONAL SALT COMPANY, INC., SCRANTON, PA.
SALES OFFICES: Atlanta, Ga. • Chicago, Ill. • New Orleans, La. • Baltimore, Md. • Boston, Mass. • Detroit, Mich. • St. Louis, Mo. • Newark, N. J. • Buffalo, N.Y. New York, N.Y. • Cincinnati, O. • Cleveland, O. • Philadelphia, Pa. • Pittsburgh, Pa. • Richmond, Va.
ENGINEERING OFFICES: Atlanta • Buffalo • Chicago

Defense Appropriation Act directive requiring that the Department discontinue operations which can be performed on an economically sound basis by private enterprise.

N. C. State Gets $72,000 Grant. The School of Textiles at North Carolina State College has received a grant of $72,000 from the North Carolina Textile Foundation, bringing the total received by the school to nearly half a million dollars since the Foundation was established about a dozen years ago. Most of the grant will be used to pay higher salaries at the School, and to attract top talent.

Automatic Lint Sampler Installed. An automatic lint cotton sampler developed by the USDA has been installed for commercial use at a Red Springs, N. C., gin. Object of the sampler is to prevent mutilation of the bale caused by the standard sampling procedure, and to provide a more representative sample. Samplers have previously been in limited commercial use in Arizona and California, and 22 more machines are on order for California gins.

Modernize, Don't Run, Says Textilist. Modernization of production methods, rather than flight to cheap-labor areas, is the answer to the problems of the textile industry, says Robert M. Schwarzenbach, president of Schwarzenbach-Huber Co. Speaking at ceremonies marking completion of a million-dollar expansion and remodeling program at the firm's weaving mill in Altoona, Pa., Schwarzenbach disclosed that his firm had virtually rebuilt its Pennsylvania plant despite the fact that it pays wages there 11 per cent higher than the national textile average.

U. S. Now Japan's Biggest Customer. The United States became Japan's best customer for cotton textiles in the first half of 1955, supplanting the Far Eastern countries which have traditionally taken the bulk of Japan's cottons, according to the Japan Cotton Spinners Association.

Japan Accepted As GATT Nation. Japan has been accepted as a signatory to the General Agreement on Tariffs and Trade by an affirmatory vote of 23 of the 34 member countries. Japan thus becomes a contracting party to GATT and the tariff concessions previously agreed upon become effective.

New Australian Wool. An experimental wool lot raised at an Australian sheep breeding station is reported to have a variation in fineness through a 2000-pound sample that is no greater than the variation found within one staple from one shearing. The fineness variation within the lot is also said to compare favorably with that of man-made yarns.

New Government Publications. Government publications now available: "Fiber and Spinning Test Results for Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1955;" available without charge from the Cotton Division, Agricultural Marketing Service, USDA, Washington 25, D. C. "Cotton Production in the United States, Crop of 1954;" available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at 15 cents.

News in Brief

Ontario Firms to Make New Yarn. Two Ontario textile mills—Dominion Woollens and Worsteds, Ltd., Hespeler; and Hamilton Cotton Co., Ltd., Hamilton—have been licensed to make the new multicore wool-nylon yarn developed by the Canadian Army [see TEXTILE INDUSTRIES for September, 1955, p. 99].

USDA Changes Fiber and Spinning Tests. The Department of Agriculture has made three changes in its fiber and spinning test methods for the 1955 crop. Strength tests by the Pressley method are being made at ⅛" gauge length as well as at zero gauge, the raw stock nep count has been dropped, and the measurement of yarn uniformity has been discontinued. According to USDA, the effect of fiber properties on yarn uniformity is too small to serve as a reliable measure of the processing quality of the cotton.

MERCHANDISING NOTES

Celanese Corp. of America has announced that more than 250 garment manufacturers are producing apparel made of Arnel triacetate, and that these garments are now available in retail stores.

Chemstrand Corp. reports that the newer man-made fibers are gradually achieving acceptance at the international couture level. According to Chemstrand's merchandising manager, Bernard F. Bertland, fabrics containing Acrilan are being used by top-drawer designers in London and Paris.

Federal Housing Administration has revised its requirements to provide for "acceptance in both new and existing construction of plywood or other hard-surfaced materials as 'finish floor,' if it is the intent of the builder or owner to install wall-to-wall carpeting at his expense and without benefit of mortgage insurance."

Chadolon, Inc., is the assignee of two U. S. patents, Nos. 2,714,812 and 2,714,757, on a method for controlling the wildness of a stretch yarn and also on a method for producing women's stretch hosiery from the yarn.

Academy of Motion Picture Arts and Sciences, citing a recent decision by the U. S. Court of Customs and Patent Appeals, has

Put strength, long life, silence into gears, couplings, loom parts with C-D-F Celoron® plastic

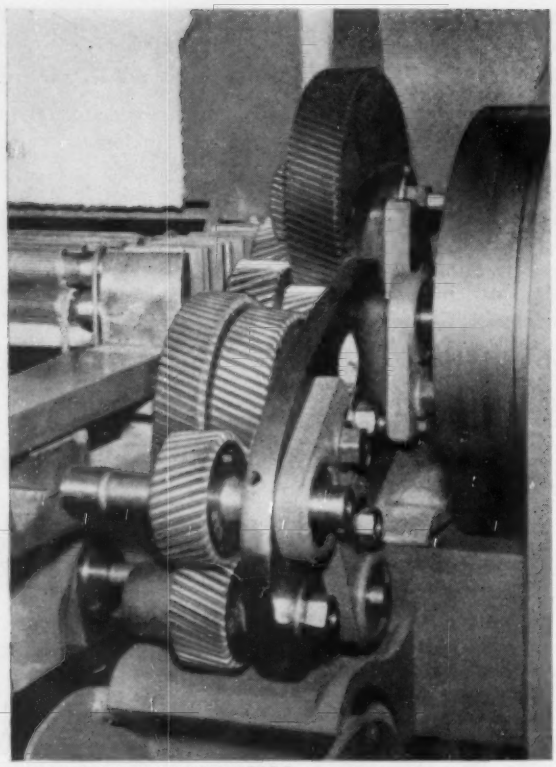
WORK MIRACLES IN TEXTILE MACHINERY— with this amazing golden plastic material! Celoron gears help eliminate noise, reduce wear on mating metal gears; and even the roughest-used helicals last . . . and last . . . and last.

HIGH MECHANICAL STRENGTH. Typical Celoron strengths: tensile, 6,500 psi; flexural, 10,000 psi; compressive, 25,000 psi; shear, 8,500 psi. Dimensionally stable and readily machined, Celoron fills the bill where costly metal parts fail.

ELECTRICAL INSULATION VALUE. Celoron is a non-conductor with high electrical insulation value. It makes ideal mechanical-electrical parts. Celoron couplings effectively insulate motors from driven machinery.

BETTER SERVICE FOR THE SOUTH. Besides having sales engineers in all principal cities, C-D-F maintains a specialized plant-warehouse stocking Celoron parts and Diamond Fibre receptacles for the Southern textile industries at 834 Hayne St., Spartanburg, S. C. Your Celoron gear blank, coupling, or loom part will reach you fast from this wide-awake distribution center.

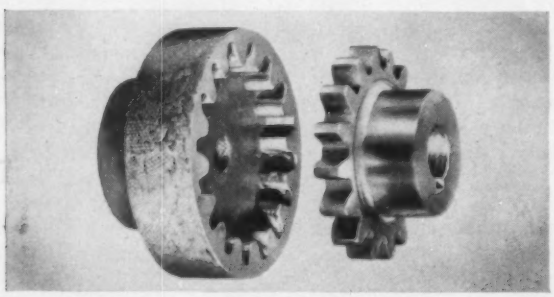
Keep in close touch with *your* C-D-F sales engineer—a good man to know!



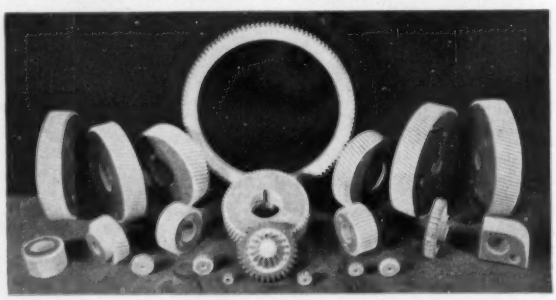
CELORON-TO-CELORON GEARS in drawing rolls made by Ideal Industries, Inc., Bessemer City, N. C. These are helical-cut gears—the toughest to machine, requiring the toughest material. Celoron is it. Other Celoron parts for this application are shown below, top right.

CDF **Continental-Diamond Fibre**

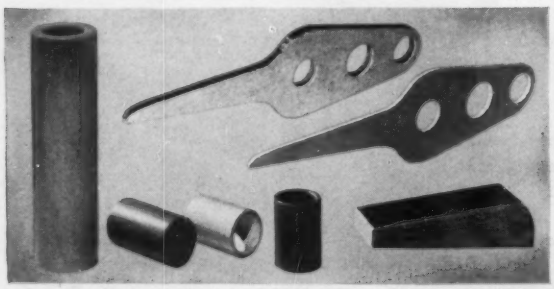
CONTINENTAL-DIAMOND FIBRE DIVISION OF THE BUDD COMPANY, INC.
NEWARK 11, DELAWARE



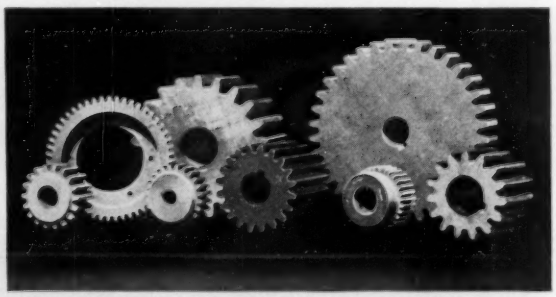
LOW-COST, EASILY-ASSEMBLED C-D-F Celoron flexible coupling transmits power smoothly, efficiently, silently . . . needs no lubrication, works on vertical or horizontal shafts.



PRECISELY MACHINED KEYWAYS help keep these Celoron parts silent and strong in the Ideal drawing rolls illustrated in top photograph. Note wide range of sizes and shapes.



YEARS OF SERVICE; freedom from maintenance, resistance to moisture—that's what these C-D-F parallel plugs, knife guides, binder bushings give the mill operator.



STRONG, SILENT CELORON makes both drive and driven gears. Metal gears don't develop excess play, last longer when they mate with Celoron. Many applications are 100% Celoron-geared.

warned manufacturers and retailers against commercial use of the Academy's award statuette, commonly called the "Oscar," and the

phrase "Academy Award" in connection with products offered for sale.

American Institute of Laundering will sponsor "Certified Washable Week" from October 13-20, 1955.

Joseph Bancroft & Sons Co. has issued a booklet on the properties and characteristics of sweaters made of Ban-Lon bulked yarn, which it is making available to retail store personnel.

Folding Paper Box Association announces that some of its member firms are producing a box for curtains which will permit the curtains to be hung directly from the box in which they are delivered, without the necessity for ironing out creases made while the fabric was lying on the dealer's shelf.

Franklin Process Co. has published a color news letter showing eight new fashion colors anticipated for the summer of 1956. Copies are available from the company at 564 Eddy St., Providence, R. I.

Jerome F. Gould Corp. recommends that the textile industry consider reusable shipping containers—packages that can be broken down after use and returned to the manufacturer—claiming that a properly designed reusable container would pay for itself after a few turn-arounds. The firm also believes that the textile industry is not making enough use of shipping containers as advertising media.

Indian Head Mills, Inc., president James E. Robison in a recent address placed the blame for the comparatively low earnings in the textile industry on underpromotion rather than overproduction. He pointed out that the textile industry, second only to food in terms of number of employees, spent in 1954 only $56 million in promotion and advertising, a mere one-half of one per cent on total industry sales of $10 billion. This contrasts with the drug industry, which spent $250 million, and the tobacco industry, which spent $80 million. These industries, like many others, have kept pace with our growing luxury economy, while the textile industry continues in the doldrums, he said.

Denim Council has been rapped on the knuckles by **National Association of Retail Clothiers and Furnishers** for its campaign to persuade customers to wear blue denims "at home, work, and play." NARCF is miffed that the Council's promotion conflicts with one of its own to get men out of blue

jeans and into something "right." "Confusing," says NARCF. But Denim Council trips blithely along and has brought out Vol. 1, No. 1 of *Denim Digest,* in which it continues to press its pitch that denim is the all-around fabric for everybody.

Fel..s Co. is marketing a silicone-treated felt, said to be particularly adaptable to fashion garments such as skirts or jackets.

Hosiery Fashions, under the direction of the William Jenkins advertising agency, announces that manufacturers of women's full-fashioned hosiery have pledged $150,000 to an advertising and promotion fund to fight the bare-leg look. The pledges are contingent on the development of a $400,000 promotion fund.

Manhattan Weaving Co. is offering three dress-weight fabrics with a Taslan textured acetate filling and black silk warp.

News in Brief

Metlon Corp. announces that this year's winner of the annual Metlon textile design award is Sylvia Rothwell, an English girl who came to this country last year on a King George VI Memorial Fellowship given by the English Speaking Union.

Redman Process American Corp. is assignee of U. S. patent No. 2,714,756, on a method for reducing shrinkage in tubular knitted fabrics.

J. P. Stevens & Co., Inc., has sent two representatives to Japan to appraise the effect of the recent heavy tariff concessions made by Congress.

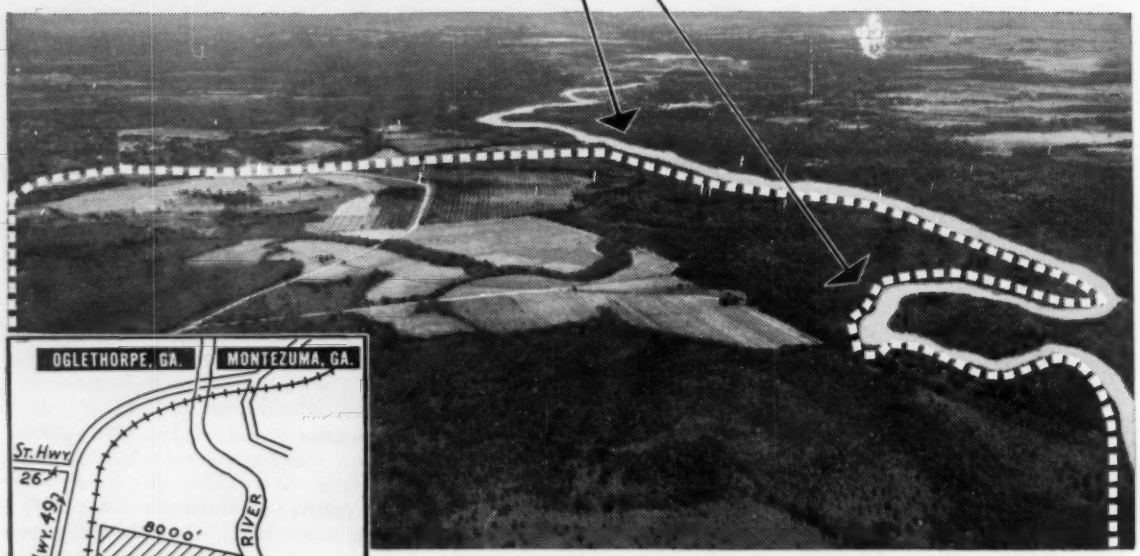
Textile Color Card Association has issued to its members the regular editions of the 1956 spring and summer color cards for man-made fibers and silk, and for woolens and worsteds. The shades in each card are different, but there is close harmony between the two color ranges to assure well-coordinated color selections.

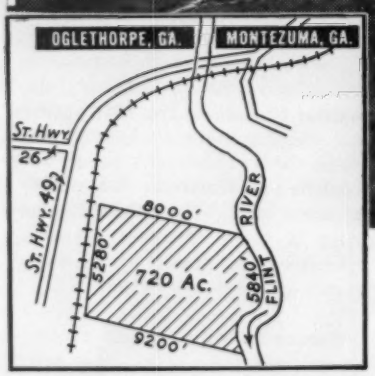
Wamsutta Mills reports receiving a letter from a customer telling how a sheet purchased by her mother has only recently begun to show wear after 31 years of use. The Wamsutta percale (now called Supercale) was recalled by the company and a new one sent to the faithful user. The old sheet was said to be in good shape, still possessing a clear appearance.

Krylon, Inc., reports that a film of acrylic plastic sprayed on hemp

and nylon ropes will result in longer wear and prevention of fraying.

Here's all the Water You Need...





for that NEW TEXTILE PLANT!

- 720 level acres located near Montezuma and Oglethorpe, Georgia.
- 5,840-foot frontage on Flint River.
- Minimum flow of 378,000,000 gallons per day at site.
- Also ample underground water supply.
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The Right Way

CENTRAL OF GEORGIA RAILWAY

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Moving Finger Writes

WE MUST admit to a feeling of frustration and no little anxiety as we view the passing textile scene. Take for example the action of the Japanese mill men in stating publicly that they are trying to work out some system whereby they can control the export of textiles to the United States. Remember when the Japanese envoys were meeting at the White House on December 7, 1941?

Also contributing to our anxiety is the extended fracas over what to do about the surplus cotton owned by the United States Government. The farmers, the shippers, the Department of Agriculture, and others say that this cotton must be sold abroad in some way, but even while they are trying to work out a plan which would be practical, feasible, and fair to domestic mills, the crop estimates have been coming out which indicate that perhaps another million bales might enter the loan and be added to the already high surplus stocks.

A part of our forlorn attitude is also brought about by the wage increase that went through the American textile industry, at least the southern part of it, in the late summer. Please do not misunderstand us. We keep hoping and praying that textile earnings will be sufficient to justify a series of substantial wage increases which would bring our industry up to the U. S. level, but what does worry us is that we widened the gap which exists between American and Japanese mills. Our only hope is that the American Government will give us the quota protection which we must have if we are to survive. Perhaps the best statement regarding the wage increase is the notice allegedly posted by The Springs Cotton Mills: "Japs or no Japs, The Springs Cotton Mills will increase wages . . . ."

Bitter Crow

While we are in this soul-searching mood, we might as well admit a rather poor prognostication. Back in the late spring we ventured to make a few prophesies about what Congress would do before its adjournment and, in one of these, we said that the deliberations in Congress over the tariff question "would have a beneficial effect upon the deliberations in Switzerland, and that it might even lead the way to establishing some sort of quota system which would give protection as far as quantity imports were concerned." As things turned out, the diplomats at Geneva cut our throats from ear to ear, and we are still scrambling through the highways and the byways trying to get support for a quota system. Please pass the crow.

We missed some other bets too, one of them being the exact figure for the new minimum wage law. We predicted the passage of the law but felt that the final figure would be 90¢. As you know, it turned out to be $1.00.

On the brighter side, we predicted that the industry would win its tariff fight as far as *legislative* action is concerned and that proved to be correct. We predicted that the bill providing for the labeling of textile products would not come up for floor consideration; that the several bills amending the Walsh-Healey Act would not reach the floor; that there would not be any export subsidy plan for raw cotton unless the domestic textile industry were protected. Although this latter point is still in the "maneuvering" stage in Washington, we believe it could be said objectively that we came out fairly well on these particular prophesies.

Industry Profits

At times we have been somewhat skeptical of the industry's own story that its profit earnings were so much lower than the earnings of other American industries. It has not been that we thought the industry was made up of a group of prevaricators, but rather that we feared they were misinterpreting or misapplying statistical data. Recently, however, we had an opportunity to give some rather serious study to government figures on this subject and, if anything, we now feel that the industry has been understating its sad plight.

Take, for example, 1952. In that relatively prosperous year the textile industry's rate of profit on sales, after taxes, was 1.86%. Petroleum refining had 10.08%; paper and allied products 5.68%; chemicals and allied products 6.13%; stone, clay, and glass 6.50%; primary nonferrous metal industries, 6.70%. All told, there were only two industries that were lower than the textile industry in 1952 and they were the apparel

Jim, it's about time to pull out stakes. Who can we get to handle the deal?

Contact COMER. They'll buy & liquidate, everything for us.

If your plans call for liquidation, contact Comer first. Comer offers you a simple 3-step plan which has proved highly successful to other mills. It can do the same for you.

1 Comer will give you a fair appraisal

McCanless Mills, Davison, N. C.—Acquired October, 1954; Sold December, 1954. Fast action like this requires experience, coordination and contacts. Let us add you to the list of our satisfied clients.

2 Comer will buy or liquidate, single pieces or entire properties

Mandeville Mills No. 2, Carrollton, Ga.—Acquired January, 1954; Sold May, 1954; A quick call started things moving for this mill. If you're selling, Call Comer first and talk things over.

3 Comer will relocate industry to your former site

Mandeville Mills No. 1, Carrollton, Ga.—Acquired January, 1954; Sold February, 1955. For 22 years Comer has served the textile industry. In 1954 this experience enabled Comer to sell over $4,000,000.00 worth of machinery.

COMER MACHINERY

If you're selling, we're buying. Write, wire or call now.

Comer Machinery Co., Inc.

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and finished textile industries with .98%, and leather with 1.75%. We cannot take much solace from this fact, however, because these are at best, or worst, sister industries.

For 1953, the picture was slightly better with textiles at 2.20%; apparel and finished textiles at 1.15%, and the other, with one exception, ranged far above us. The exception was leather and leather products at 1.85%.

However, whatever feeling of confidence might have been engendered by the poor position of the leather and apparel industries was completely dissipated by 1954 when the textile industry dropped down below both leather and apparel with a .95% rate — the lowest of any industry in America.

Summing up this sad situation, in 1952 the textile industry was third from the bottom, in 1953 it was fourth from the bottom, and in 1954 it was at the bottom of the pile. Any argument?

Japanese Garments

The profit figures on the apparel industry call to mind the fact that Japanese garments are flooding the American market at an unprecedented rate. The "leader" seems to be a women's blouse, or shirt, made of combed gingham and retailing here for $1.00. We have seen some of these and they are of excellent quality and workmanship. We would estimate that a comparable American blouse would have to sell for somewhere between $3.50 and $4.50.

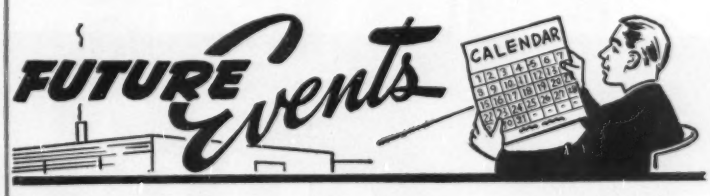
Woven cotton shirts have been coming in from Japan at a rate of better than 30,000 dozen a month for the past two or three months, but there has been some Japanese speculation that they might possibly reach an annual goal of 2 million dozen shirts.

In spite of these alarming figures, we have the feeling that there is a lack of understanding in the American apparel industry with regard to the Japanese danger. We have heard some garment manufacturers express the belief that the situation might be even better if more Japanese goods could come in because then garment plants could purchase Jap cloth at a figure below the American price.

However, we find it difficult to believe that any such idea prevails throughout the industry because certainly garment manufacturers must realize that Japanese competition lies not only in the field of grey and finished goods, but also in the garment field. They must also realize that if Japan should ever get control of the American grey goods market, the price structure of grey goods would no longer be left to the field of competition. The Japs would be in the saddle and they would ride the horse for all it is worth.

Maybe we are not fully aware of the interest and the efforts of

(Continued on page 171)



OCTOBER

Oct. 1—Fall meeting, **Alabama Textile Operating Executives,** Thach Hall, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 1—Meeting **South Carolina Division STA,** Clemson House, Clemson, S. C.

Oct. 3—Annual meeting **National Federation of Textiles,** Waldorf-Astoria Hotel, New York, N. Y.

Oct. 7—Meeting **Pacific Southwest Section AATCC,** Gourmet Restaurant, Beverly Hills, Calif.

Oct. 13—Meeting **Rhode Island Section AATCC,** Johnson's Hummocks, Providence, R. I.

Oct. 13-14—49th annual meeting **North Carolina Textile Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

Oct. 14—Meeting **New York Section AATCC,** Kohler's Swiss Chalet, Rochelle Park, N. J.

Oct. 14—Meeting **Northern New England Section AATCC.**

Oct. 15—Meeting **Eastern Carolina Division STA,** North Carolina State College, Raleigh, N. C.

Oct. 17-19—**Fall meeting, National Council for Textile Education,** The Larches, Hopedale, Mass. Hosts: American Textile Machinery Association.

Oct. 17-21—**43rd National Safety Congress and Exposition,** Conrad Hilton, Congress, Morrison, and LaSalle Hotels, Chicago, Ill.

Oct. 21—Meeting **Philadelphia Section AATCC,** Penn-Sherwood Hotel, Philadelphia, Pa.

Oct. 29—**Fall meeting Textile Operating Executives of Georgia, Georgia** Institute of Technology, Atlanta, Ga. Subjects for discussion: Slashing, weaving, power, and maintenance, 9:00 A.M.

Oct. 29—Meeting **Mid-West Section AATCC,** Bismarck Hotel, Chicago, Ill.

Oct. 29—Meeting **Piedmont Section AATCC,** Hotel Wm. R. Barringer, Charlotte, N. C.

Oct. 29—Meeting **Piedmont Division STA,** Johnston Memorial YMCA, Charlotte, N. C.

NOVEMBER

Nov. 3-4—Annual **Mid-Atlantic AIEE Textile Conference,** North Carolina State College, Raleigh, N. C.

Nov. 10-11—Annual meeting **Carded Yarn Association,** Bon Air Hotel, Augusta, Ga.

DECEMBER

Dec. 6-7—Film, Sheeting, and **Coated Fabrics Conference of the Society of the Plastics Industry,** Hotel Commodore, New York, N. Y.

Dec. 10—Meeting **South Central Section AATCC,** Hotel Patten, Chattanooga, Tenn.

1956

Jan. 30-31—Annual meeting **National Cotton Council of America,** Biloxi, Miss.

Feb. 15-17—Seventh annual **Cotton Research Clinic,** sponsored by National Cotton Council, Pinehurst, N. C.

April 5-7—Annual convention **American Cotton Manufacturers Institute,** Hollywood Beach (Fla.) Hotel.

April 11-13—Annual convention **Alabama Cotton Manufacturers Association,** Hotel Buena Vista, Biloxi, Miss.

April 18-19—Annual convention **National Knitted Outerwear Association,** Waldorf-Astoria Hotel, New York, N. Y.

April 19-21—Annual convention **Phi Psi Fraternity,** Alabama Polytechnic Institute, Auburn, Ala.

April 30-May 1—Annual meeting **National Association of Hosiery Manufacturers and Hosiery Industry Conference,** Boca Raton (Fla.) Hotel and Club.

May 2-3—Spring meeting of **The Fiber Society, Inc.,** The Clemson House, Clemson, S. C.

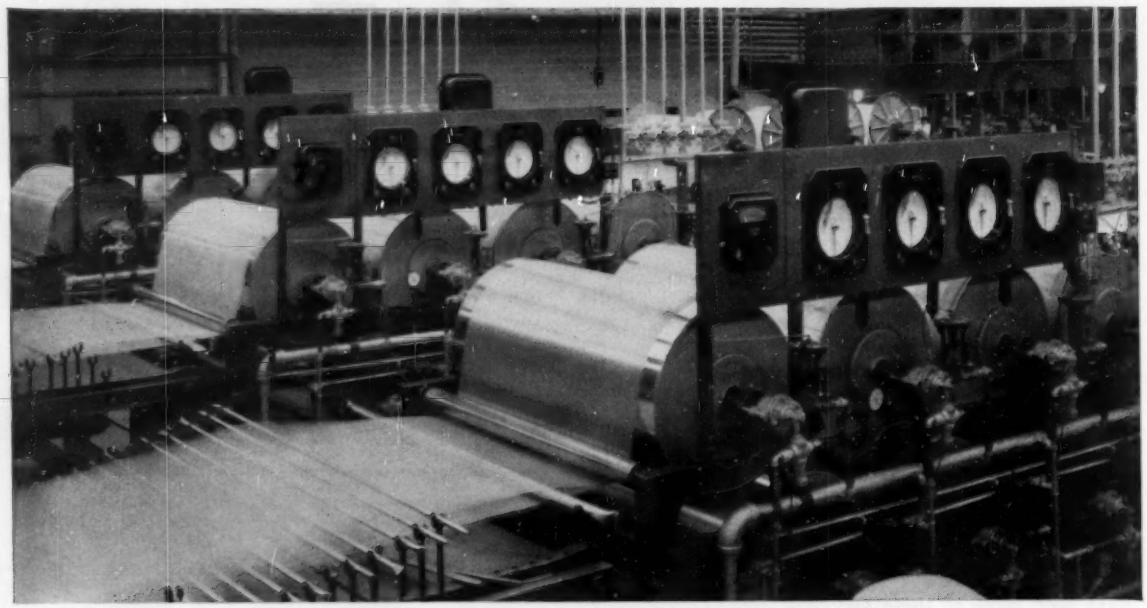
May 4—Annual convention of the **Underwear Institute.**

June 21-23—Annual convention **Southern Textile Association,** Mayview Manor and Green Park Hotel, Blowing Rock, N. C.

Sept. 10-12—National convention **AATCC,** Waldorf-Astoria Hotel, New York, N. Y.

Oct. 1-5—19th **Southern Textile Exposition,** Textile Hall, Greenville, S. C.

"Taylored"
to the LIGHTEST FILAMENTS
or the **HEAVIEST SPUNS...**



FOR the best slashing results, the Taylor method of controlling moisture content of the yarn by regulating the surface drying temperature of the slasher cylinders is the most accurate of any yet devised. And there are Taylor systems for the lightest filaments or heaviest spun yarns.

It has been proven that the Taylor Control System will increase weave room efficiency regardless of the type of yarn being run, or the number of cylinders on your slasher.

Two other big advantages are quick, automatic start-up (heat up time is reduced as much as 75%) and the Taylor system of air injection. This gives accurate control regardless of operating temperature.

Whether your high-speed slasher is 5, 7, 9, or 11-cylinder, rayon or cotton, you can equip it with Taylor individual or group cylinder control.

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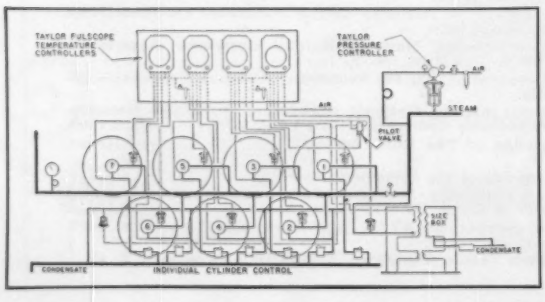
Ask your Taylor Field Engineer, or write for **Bulletin 98229** for details of Taylor systems for *size cooking, storage kettle temperature control, size box level and temperature control*, as well as *slasher cylinder temperature and pressure control*. Taylor Instrument Companies, Rochester, New York, and Toronto, Canada.



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That's a nifty custom, neighbor, and I'm interested.
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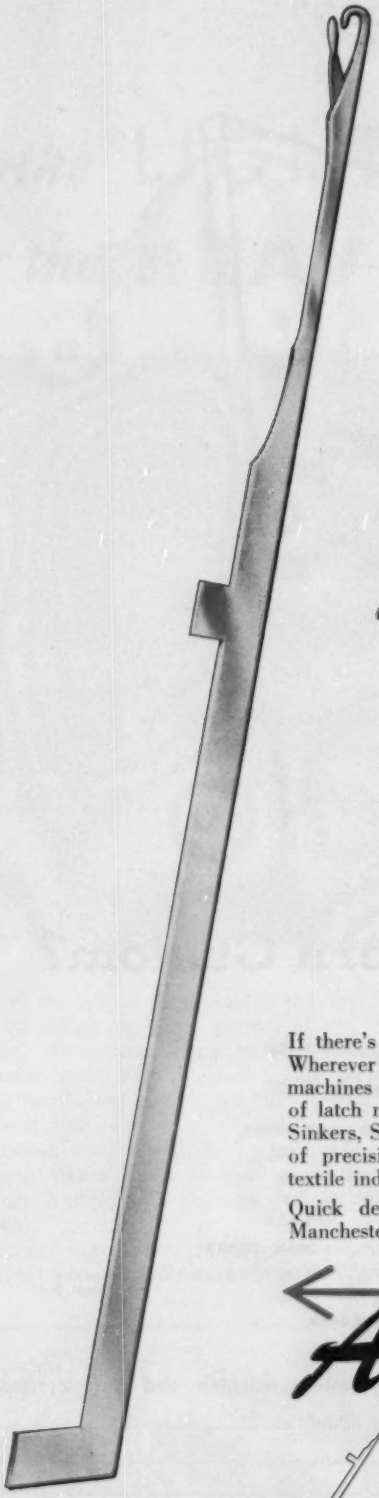
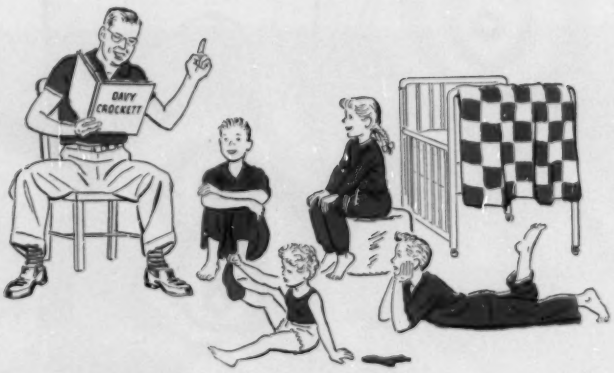
THE FIRST NATIONAL BANK OF ATLANTA

First THE NATIONAL BANK OF ATLANTA

The bank that knows its neighbors



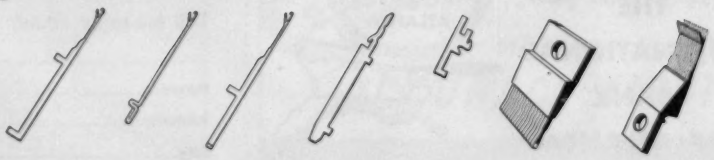


A Story with a Smooth Finish

If there's anything that knits a family together, it's Arrow Latch Needles. Wherever and whenever knitted wear meets group approval, you'll find knitting machines using these needles. They *always* have a smooth finish . . . freedom of latch movement . . . a strong latch. Arrow Latch Needles, together with Sinkers, Sliders, Jacks and Leaded Assemblies, are made to Textile's standard of precision — backed by Textile's half-century record of *service* to the textile industry.

Quick delivery from stocks in Reading, Penna., Asheboro, N. C., and Manchester, N. H.

Arrow Latch Needles



Wire Products Division

TEXTILE MACHINE WORKS, READING, PENNA.

Test and Correct Quickly

BY DOUGLAS L. POWELL
Quality Control Laboratory Supervisor
Avondale Mills

EXCLUSIVE

A SIMPLIFIED but effective system for promptly correcting processing machines which are operating beyond the allowable variation is being used by Avondale Mills' plants in Sylacauga, Ala. The system consists of: (1) testing of stock in process by laboratory personnel (2) recheck of machines that are not in control (3) notification and testing chart sent to departmental supervisor (4) correction at machine (5) further check when machine has been corrected.

Stock from four machines of each process is checked daily on the Uster tester. When any of the samples exceed the allowable limits (three sigma), a recheck is taken immediately. Should the sample continue to exceed the allowable limits, a chart is made of the sample.

Laboratory personnel then prepare an "Out of Control Report," attach the chart to it, and send both to the departmental supervisor, who inspects the machine and has it corrected. Another sample is then taken to determine if the machine is within limits.

When the system first was installed, the laboratory personnel made suggestions, based on the interpretation of the chart, as to where the trouble might be found. These suggestions are not as necessary now because the supervisors make a quick visual check and usually find the trouble.

A follow-up is included in the system; the supervisor notifies the laboratory of the "action taken" to correct the machine. Usually correction is made the same day that the machine is discovered "out of control," and often the sample from the corrected machine is brought to the laboratory by the supervisor, who waits for a test result.

"Out of Control Report" forms are maintained on file by the laboratory.

QCF 13 OUT OF CONTROL REPORT

Date _____ Mill Eva Jane Operation Uster

Material Drawing

Allowable Variation 4.3%

Test Results: 5.6%

Comments:
Repeated cycle every 5 inches. Suggest checking second roll.

Signed _____

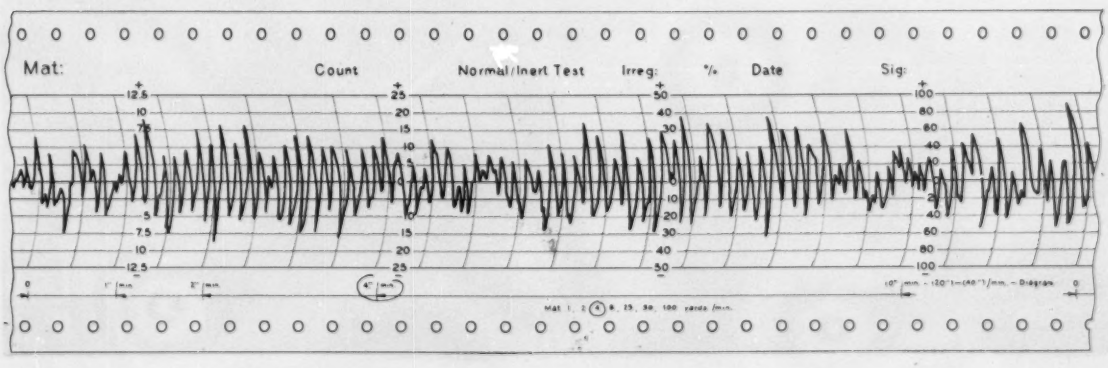
ACTION TAKEN

Found bottom roll to be crooked.

Retest Results:

Fixed by: L Foreman's Initials

USTER CHART (below) spots machine producing irregularities; departmental supervisor is notified on Out of Control Report (above).



Bulked Yarn Problems Can't Be

Stretch - bulk, nonstretch-bulk, and high-torque yarns present unique problems of manufacture and use. Here are some of the keys to a better understanding of how to cope with them.

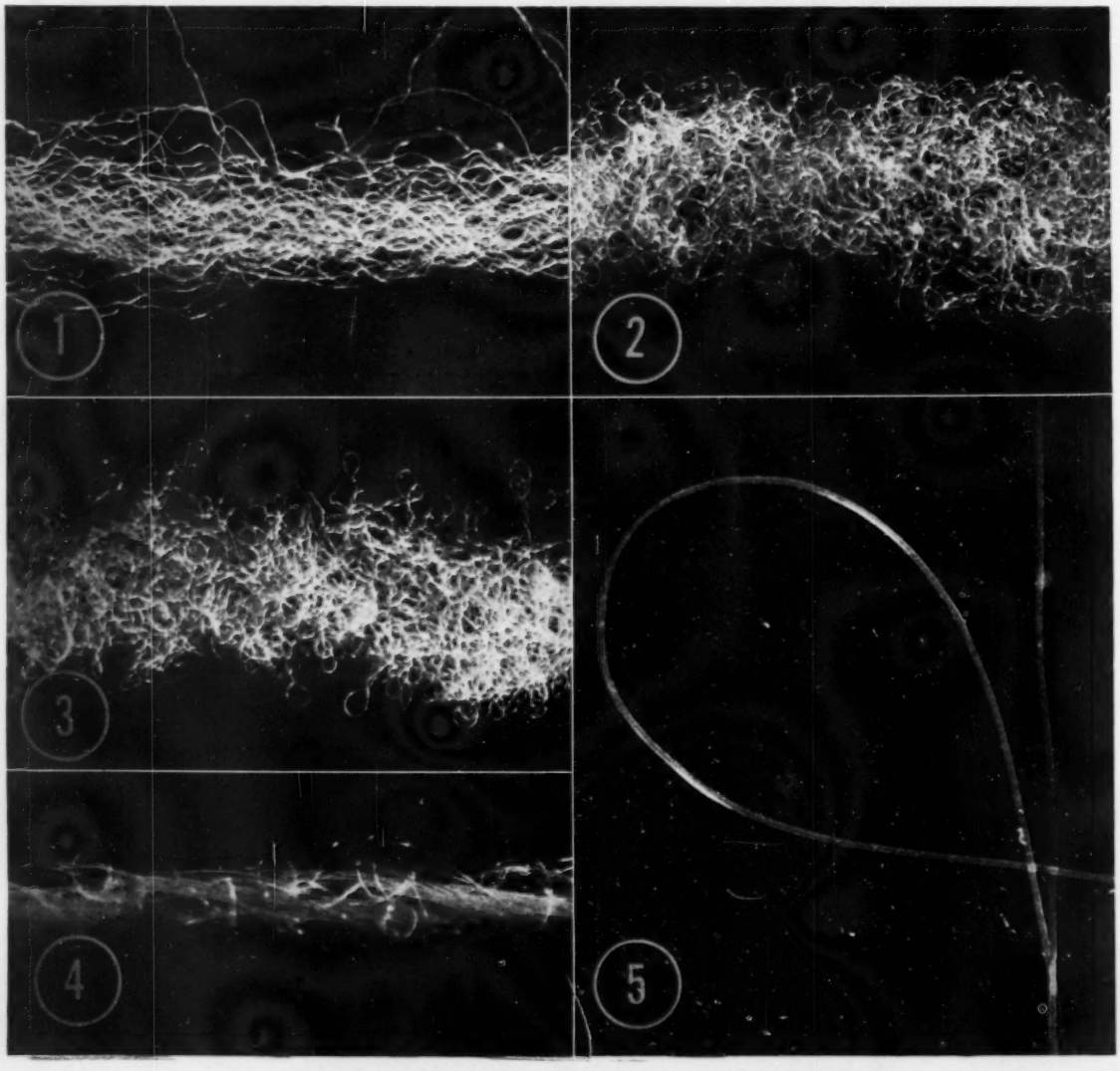
STAFF PREPARED

WHEN THE first man-made fiber, rayon, was produced, the approach of spinner, throwster, weaver, knitter, and wet processor alike was derived from, if not exactly the same as was used in, the silk system. Rayon became a poor relation: artificial silk. If the luster of a rayon taffeta was objectionable, it was because it did not look like the same construction in silk.

We have learned since then to judge a new fiber on its own merits, to plan and manufacture yarn and fabric to take advantage of outstanding fiber properties, and to accommodate its unique manufacturing behavior with creativeness rather than adaptation.

Because of the costly lessons learned during this growth period, the industry is now equipped to consider its newest addition, bulked synthetics, as a separate field; it considers this complex

BULKED AND HIGH-TORQUE YARNS magnified about 50 times: **1.** Ban-Lon, 70-denier, 34 filaments, two-ply; a stretch-bulk yarn. **2.** Fluflon, 100-denier, 34 filaments, two-ply; a stretch-bulk yarn. **3.** Helanca, 70-denier, 34 filaments, two-ply, a stretch-bulk yarn. **4.** Taslan, 80/70-denier (Taslan is designated thus: *resultant denier after Texturizing/original denier before Texturizing*), 34 filaments; a nonstretch-bulk yarn **5.** Hytor, 15-denier monofilament, a high-torque yarn.



Solved By Traditional Methods

family of yarns in a third class, divorcing it from traditional spun or continuous filament yarns. There will emerge from development of such thinking, plus practical experience, new products, new equipment, and new marketing and merchandising techniques.

This is a report covering some of the problems connected with this development, and it includes some of the keys to their solution.

Significance. Bulked yarns, whether in the stretch class or not, are derived from a man-made continuous filament yarn by a combination of some mechanical manipulation and a thermo-setting process or by purely mechanical means, resulting in a lofty yarn. This was heretofore possible only through some form of reducing a mass of fiber or a tow to a yarn by repeated drafting.

Bypassing the multiple operations of spinning, and keeping the material in the same form as it was when it was extruded, spells the importance of this class: a logical conversion method, and an economical one.

In addition, new fields have been opened up. For example, in tricot knitting, a spun yarn fine enough to pass through machine needles, be economical, and measure up to standards of evenness has been an impossibility. In order to obtain cloth with adequate cover, flat filament goods commonly tricot knitted have a relatively high material cost, tending to counter-balance economies of the characteristic high production of the machine.

Because cover equal to that of corresponding spun yarns can be obtained with 70 to 75 per cent less weight in bulked yarns, and because bulked yarns fill requirements of uniformity, fineness, and cost, the whole tricot picture is expected to expand.

Another application might well come in the sheer woven class, where bulk will permit lightweight yet slip-proof fabrics.

To date, bulking by mechanical-heat setting techniques has centered on nylon and Dacron; work is being conducted in the lab on Orlon and the cellulosics. The single process which is purely mechanical, Du Pont's "Texturizing," has been applied to all fibers.

The question involved in assigning significance to this third class seems to be how much will be used, rather than will it be used; it will replace spuns to a certain extent but, more important, it will be applied to new uses.

Types of Bulk Yarns

Because of the newness of the processes required to produce the various yarns to be described herein, plus the fact that many are still in the stage of "patent applied for," licensees in production on the yarns are bound to a non-disclosure clause by the licensor. Rather than describe the yarns here in terms of their method of manufacture, which must necessarily be in the most general terms, details of the properties of each as they apply to fabric manufacturing will be used as a guide for classification.

Stretch-Bulk Yarns. This class of yarns is characterized by the presence of some type of pronounced, permanent crimp in a multifilament or monofilament yarn. The nature of this crimp is such that it lends loft and resilience (liveliness and linear elasticity) to the yarns. There

Physical Properties Affecting the Nature of Bulked Synthetic Filament Yarns

1. Bulk is the property on which coverage or loft in a fabric as against yarn weight depends. Factors which influence bulk are fiber diameter and shape of crimp, yarn size and crimp, and fabric tightness.

Crimp is the strongest influencing factor, the more crimps the more bulk, as fiber denier decreases crimp frequency increases; even in the face of restriction by other forces, the crimps, no matter how small, tend to separate fibers, increasing coverage and resilience.

Generally, in filament bulking, finer crimp levels are obtained than are found in natural staple fibers, and twist required is less than required in staple fiber yarns. In evaluating hand, a high crimp gives something equivalent to a cotton hand, and low crimp suggests a worsted hand.

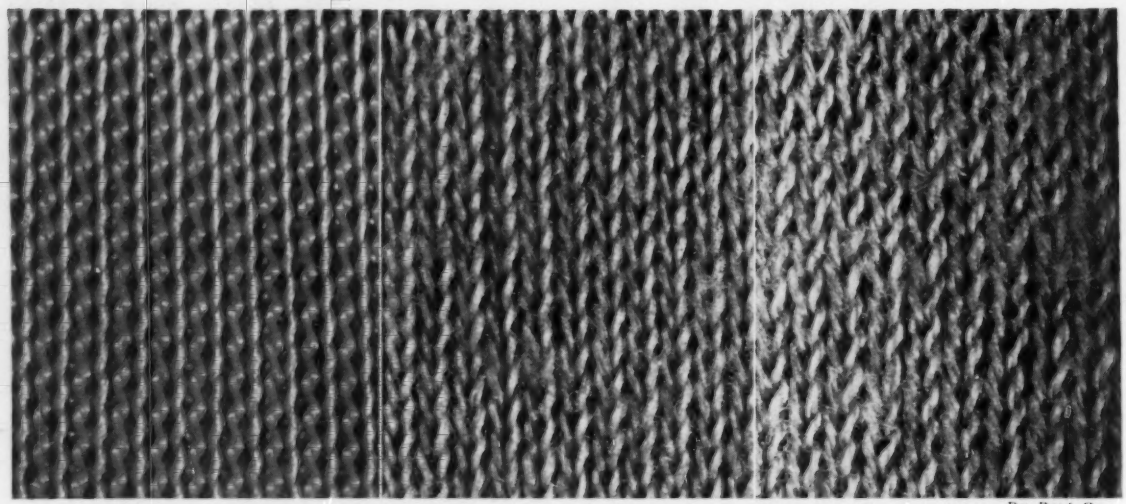
2. Resilience covers both elasticity and liveliness, and is dependent on shape of fiber crimp. Sinusoidal and sawtooth shapes are resilient, loops are not; spiraling increases elastic properties.

3. Water absorption is generally dependent on mechanical entrapment, rather than fiber regain. This is determined in bulked filament yarns by the distribution and amount of crimp in the fiber. High frequency and high amplitude crimp in hydrophobics can therefore provide absorbencies as high as 700 to 1300 per cent.

4. Abrasion resistance is increased by bulking filament yarns but not enough work has been done to date to offer more quantitative details.

5. Tensile strength is not considered to be materially altered from the original strength of the flat filament yarn because of a bulking process.

6. Resistance to pilling is dependent on free fiber ends. Where they are present, and a strong fiber is in use, pilling will generally occur. Since most bulking methods in their basic form call for 100 per cent continuous filament materials, bulked yarns can be said to resist pilling provided fibers are not unduly broken in finishing or use.



Du Pont Co.

DIFFERENCE IN COVER AND LUSTER can be seen by comparing a nylon bulk yarn, Taslan, knitted in half-hose (center), with the same fabric made from a continuous filament yarn of the same fiber and base denier (left). A difference of weight for the same cover is illustrated by comparing the bulk yarn cloth with the half-hose made from spun nylon (right).

are four yarns of this class currently being made.

Of these four, Helanca and Fluflon can be considered the same in most respects; they differ only in the method by which they are made. The shape of the crimp is sinusoidal, of a very high frequency and amplitude, with a good deal of torque-derived spiraling in the crimp. The outstanding characteristic of these yarns is very high bulk and stretchiness. Plying is usually required to balance spiraling; 70-denier, 2-ply is the most commonly used yarn of this type in the mills today and the greatest use to which it is being put is in knitting men's socks.

Ban-Lon contains a saw-tooth-shaped crimp with no spiraling, which can be compared to the crimp found in wool. Its major characteristic is softness; no generalization can be made concerning amplitude and frequency of crimp because the yarn manufacturing process can be varied to yield a wide variety of crimp specifications.

Yarns have been made commercially in a range of 30-denier to 70-denier inclusive, and heavier weights made by plying 70-denier. Plying is not required to balance the yarn, since torque is not significant.

To date, Ban-Lon has been used principally for standard circular knitting and interlock for sweaters.

The fourth bulk-stretch yarn being made is Agilon. The crimp of the filaments in this yarn is spiral in shape, and the spirals are controllable but generally are of high frequency and are fairly regular.

Plying is not required to balance Agilon yarns, since the crimp is nontorque derived. However, combinations with cotton and worsted, particularly cotton, are being made for use in men's socks and body knitting.

Agilon is being made from 15-denier up through the entire filament range, and its use in 15-denier monofilament women's seamless hosiery is an important one.

Nonstretch Bulk Yarn. The single member of this class of filament yarns is Taslan. Most reference to bulking in this report includes its dependency on crimp; in Taslan the same general effect is achieved by loops rather than crimps.

Since the manufacturing process does not depend on heat setting, a greater variety of fibers have been used in Taslan yarns than in the stretch-bulk class; because the loops are locked by twist in the yarn core, Taslan is not a stretch yarn.

In fitting Taslan into the list of properties affecting the nature of bulk yarns described elsewhere in this report, it must be noted that additional factors are important: fiber cross section, loop size, and loop frequency.

Taslan tends to lend crispness to a fabric; crispness is increased with use of higher filament deniers and increased yarn twist; softness is increased with increased loop size; and for the same loop size, higher frequency increases bulk and dryness of hand.

This yarn is being made from 24-denier, 20-filament up to 930-denier, 140-filament, and development is being carried out on a wide range of fabric classes.

High-Torque Yarns. This group cannot be described in terms of the nature of the yarns; they are permanently lively or "wild," and when knitted in a 1-1 or 2-2, S and Z twist arrangement, the resultant fabric becomes elastic. Bulk is of no importance in high torque yarns.

Fabric stretch is activated in much the same way as in true woven crepe fabrics using high twist filament yarns: the yarns tend to untwist, knitted rows lay over on their sides in zig-zag fashion, governed by twist direction, and the natural position of

the goods is a contracted one.

Several trade names have been registered in this group, among them Hytor, Chadelon, and Burmilized. The yarns are used in women's hosiery and numbers used include 7-, 10-, 12-, and 15-denier. The fact that most work has been done on monofilament has been governed only by the nature of the filament yarn supply and the market requirements.

Planning a Fabric

Since most of the experience of mill men in planning a fabric is in terms of either spun or continuous filament yarns, they naturally tend to think of bulk yarns in a comparative way. The following generalizations are therefore based on comparison.

Filament Yarn Comparisons. For the same weight, bulk yarns possess from 60 to 80 per cent more cover than do flat filament yarns. Because of this big difference, it is quite difficult to use a bulk yarn in a style that is the same in detail as a standard filament fabric.

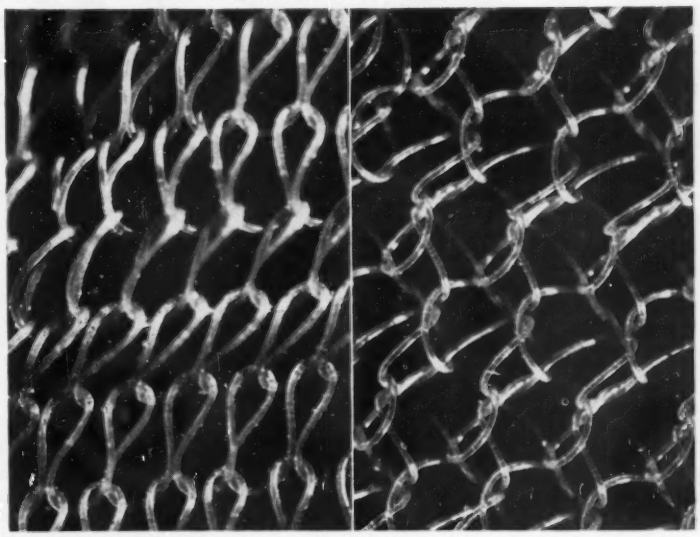
For example a 70-denier, 34-filament nylon taffeta, 104 x 76, is almost impossible to duplicate from bulk yarns of the same denier. When the weight of the bulk yarn is reduced to get the same cover as with flat filament yarns, the number of filaments available is not sufficient to obtain the proper hand; a corresponding reduction in pickage plus use of a heavier denier therefore must also be planned to get a bulk yarn for best cover and hand.

This illustrates the need to plan on the basis of bulk yarns independently rather than to transpose them into some accepted flat filament style.

Spun Yarn Comparisons. In knitted and loosely woven constructions, bulked yarns yield an average of from 30 to 50 per cent more cover than the corresponding weight in a spun yarn; for worsted this figure is 30 to 35 per cent, for mohair it is as high as 100 per cent.

Here another problem arises: when only weight and cover are considered in making a cloth usually associated with a spun yarn, hand of fabric may suffer. In knitting goods for men's sweaters, for instance, the use of 70-denier, 34-filament bulked nylon to arrive at a corresponding weight and cover of a spun yarn cloth, the hand becomes too soft and feminine. The next coarser size, 100-denier, 34-filament nylon makes too harsh a fabric.

The solution suggested is that the prime filament yarn producer must be called upon to supply a yarn tailored for bulking; perhaps an 85-denier yarn would do the job.



HIGH-TORQUE YARNS "want to contract" when knitted, because of their permanent liveliness and two-directional twist arrangement. Woman's stocking shows this: stretched (left); contracted (right).

Controlling Stretch. Stretch is no new quality to the knitter; the nature of the knitted loops is such that knitted goods usually stretch to some extent, regardless of the yarn used. With bulk-stretch and high torque yarns, from the fabric construction standpoint the question becomes almost academic: how much will the article contract from the original dimensions in the knitting machine? It has been in this field that much of the bulk-stretch and high torque yarns have quickly found a place, in one-size garments.

As weavers of rubber-bearing elastic yarns know, fabric stretch can be fairly well planned in advance by a knowledge of yarn stretch, type of weave, and number of bindings on the yarn per unit length. Generally, this is a question of control of the amount of free yarns between binding points; the yarn is inserted under stress, the yarns are locked in that position, and fabric stretch is limited to that position.

Control of fabric stretch in weaving bulk-stretch yarn is essentially based on the same principles, except that the "kick-back" of the cloth is not as strong as it is with rubber-bearing yarn fabrics.

Making the Fabric

In a very broad sense, it can be said that the bulk and surface characteristics of bulk and bulk-stretch yarns make it desirable to treat them as spun staple yarns in throwing, warping, sizing, weaving, and knitting.

In addition, because of the stretch of bulk-stretch yarns and the wildness of high-torque yarns, special techniques and possibly the development of new equipment are needed to meet characteristic problems in winding, and loom and

knitting machine tensioning.

Winding. In winding a stretch yarn made from high-strength filament synthetic yarn onto any package, if too much crimp is removed, the chances are good that elastic recovery of the stretched yarn will tighten up on, and possibly crush, the package. While the knitting or weaving effectiveness of the yarn is in no way altered in winding, regardless of tension, such conditions as tightening up of bulk-stretch yarn on a paper cone so that it can't be easily removed from a winder are possible.

Knowing the exact tensions to apply to avoid this is quite a problem; one general suggestion covers tensions of five to seven grams for winding knitting cones, 10 to 20 grams for quilling shuttle bobbins, and as high a tension in warping as is possible without crushing beams. It has been noted that a pineapple cone is desirable.

It should also be noted that this problem concerns packages only; the original shape of the yarn returns at the first ballooning from the package. And, while a yarn can stretch up to 400 per cent, forces are low, so that the package-crushing danger is not as great as when drawn nylon contracts.

Knitting. Because of the wildness of high-torque yarns, considerable care must be taken during hosiery manufacture. Details of these and other techniques were covered in a previous article [see TEXTILE INDUSTRIES for June, 1955, pp. 180-183].

Weaving. Again, as is the case in weaving yarns containing rubber, shuttle tensions for stretch-bulk yarns require special care. In rubber work, either a plate tension or spring-and-plate tension is used to remove as much stretch as possible from the filling yarn. This control seems to be appropriate for stretch-bulk yarn as well, since the filling yarn is locked permanently in whatever position the shed closes on it. It seems best to keep that position the same for every pick.

Wet Processing. Although there are exceptions, dyeing and finishing of filament bulk, bulk-stretch, and high-torque yarns follow the procedures used for flat filament work. One example of an exception is the additional care required in heat setting bulk-stretch yarn hosiery to prevent loss of stretch through prolonged exposure and excessive temperatures. This is especially important in preboarding and boarding.

Where the bulk or stretch of one of these yarns is dependent on thermosetting, its characteristics are permanent to all normal conditions of dyeing, laundering, and wearing.

Acknowledgment

Much of the material in this report was adapted from papers and floor discussions following the papers given by Leo W. Rainard, Joseph Bancroft & Sons Co., and Joseph T. Rivers, Jr., E. I. du Pont de Nemours & Co., before a recent meeting of the Textile Engineering Division, American Society of Mechanical Engineers.

Additional material received from E. J. Schellenberger, Jr., Atwater Division, Hess, Goldsmith & Co., Inc., is gratefully acknowledged.

Record Output of Tufted Rugs and Carpeting

TOTAL SHIPMENTS of tufted textile products, and woven and knitted cotton rugs amounted to $128.4 million during the second half of 1954, according to the Bureau of the Census, Department of Commerce. This compares to shipments of $90.0 million and $98.3 million during the first half of 1954 and the last half of 1953 respectively. Other interesting facts contained in the report follow:

Tufted Rugs and Carpeting. During the last half of 1954 the value of shipments of tufted rugs and carpeting was $94.3 million, or the highest output on record for these products. Value of shipments of tufted rugs larger than 4x6 feet was 49 per cent above the previous half year, and 92 per cent higher than the last half of 1953. Shipments of tufted rugs 4x6 feet and smaller increased 36 per cent during the last half of 1954 as compared to the previous period and 21 per cent compared to the last half of 1953.

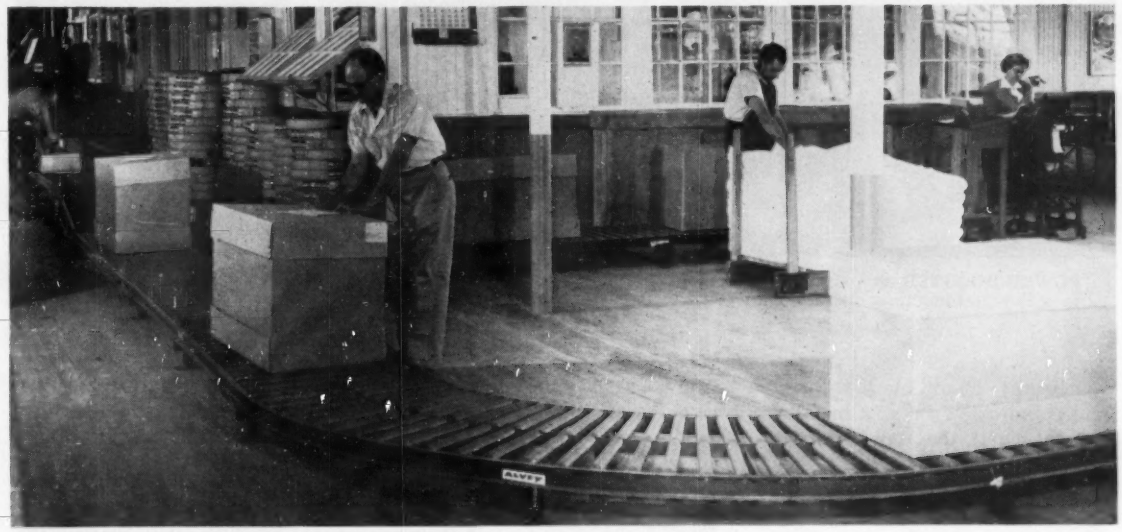
Tufted Robes and Bedspreads. During the year ending December 31, 1954, the value of shipments of tufted bedspreads was $46.7 million or 1 per cent below the previous year, while shipments of robes, at $8.3 million, declined 19 per cent from the previous year's total. (Comparisons between semi-annual periods for these products have not been made because seasonal influences have a major effect on shipments.)

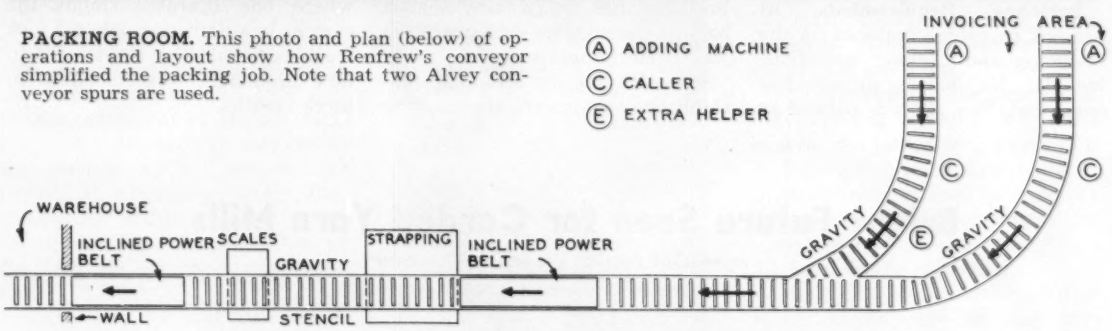
Materials Used. Manufacturers consumed 113.5 million pounds of yarn and fabric during the last half of 1954 for the production of tufted products and woven cotton rugs and carpeting. During the previous half year, 87.5 million pounds were consumed.

While cotton yarns used for tufting accounted for 67 per cent of all tufting yarns consumed, very large increases were recorded in the consumption of rayon, acetate, and other yarns. During the last half of 1954 manufacturers consumed 21.0 million pounds of rayon and/or acetate tufting yarns compared to 11.2 million pounds during the previous half year and 5.3 million pounds during the last half of 1953. During the last half of 1954, the consumption of other yarns, which were primarily nylon and nylon mixtures, increased from .2 million pounds to 2.9 million pounds.

The consumption of jute fabrics for backing reached 8.4 million pounds during the last half of 1954, an increase of 58 per cent compared to the first half of 1954 and 190 per cent compared to the last half of 1953.

This Cloth Conveyor Simplified Operations and Cut Costs





PACKING ROOM. This photo and plan (below) of operations and layout show how Renfrew's conveyor simplified the packing job. Note that two Alvey conveyor spurs are used.

STAFF PREPARED

EXCLUSIVE

RENFREW Bleachery, Travelers Rest, S. C., had a costly operation in packing finished cloth for shipment. The entire operation was recognized as relatively inefficient despite the flow of a large volume of cloth through the packing department. Now 10 persons do the work formerly done by 17 operatives, and with less effort.

Old Requirements. Seventeen employees (including invoicers) formerly operated on a two-shift basis. Four persons were used to do the invoicing. Two men on each shift put cloth into paper containers. One man on the first shift and one on the second shift strapped the cartons by hand. One operative on each shift stenciled the cartons. One man on each shift weighed the cartons of cloth and marked the weight on carton and invoice and also checked for correct stenciling.

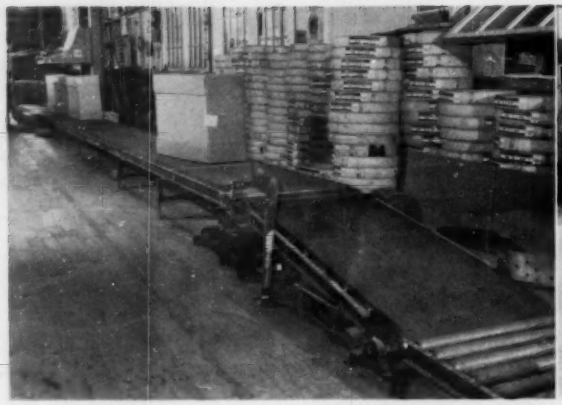
Formerly two men on the first and one man on the second shift were required to put the boxes of cloth on trucks, take them to the scales, and then remove boxes to the warehouse.

New Arrangement. A gravity roller type conveyor was installed to operate in conjunction with a power-driven belt type conveyor which delivers the cloth to an automatic steel strapping machine. After the cartons are strapped they are delivered by gravity roller conveyor to scales and then into the warehouse where the conveyor terminates. Here the cartons are trucked into appropriate storage space.

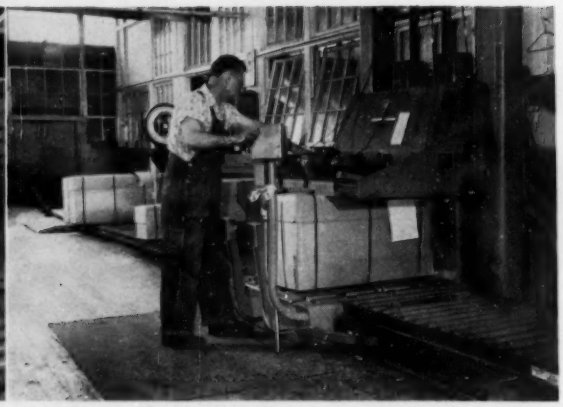
The gravity conveyor starts on two spurs in the folding room. The two spurs converge into one line which feeds the strapping machine.

Two spurs are used in the folding room to permit invoicing all cloth as it is placed on the conveyor instead of invoicing from skid-to-skid and then to the packing room. There is much less confusion with the new method.

Formerly cloth was removed from one skid and put on another as yardage was checked for invoicing. Then the skid was trucked to the packing room, removed from the skid, and packed in cartons. *(Please turn page.)*



POWER BOOSTER on main line lifts cartons so that they flow to remaining operations by gravity.



AUTOMATIC STRAPPING machine is tied in with conveyor. Footstop holds packages out of Acme strapper.

One-shift operation was tried before the conveyor was installed just to see if the flow of goods could move satisfactorily on one shift instead of two.

Personnel Requirements. At present, personnel required for the invoicing and packing operations includes: No changes in invoicing personnel. The cloth is packed as it is invoiced by those who do the invoicing. Two operatives assemble paper cartons and keep them readily available.

One man operates the strapping machine (leased), and the entire line operates on a single shift basis; whereas, two-shift operation was formerly necessary.

Upon leaving the strapping machine, the cartons are stenciled by one operative. After stenciling, one operator weighs the cartons, records the weight on invoice and carton, and checks the stencil.

Then the conveyor delivers the carton out of the packing room where one operator stands the cartons in a position ready for fork truck removal. The investment in new equipment was amortized in three months.

Bright Future Seen for Carded Yarn Mills

BY WALLACE L. ASHBY AND WILLIAM J. MARTIN*
Agricultural Marketing Service
United States Department of Agriculture

COMPOSED of approximately 200 mills, the carded sales yarn industry operated about 7 per cent of the 20 million active cotton spindles in the United States in 1952, consumed 1½ million bales of cotton, and produced 587 million pounds of yarn. Approximately one-half of production of this segment of the industry customarily goes into woven fabrics, one-third to one-quarter into knit goods, and the remainder into miscellaneous products.

Quality of Raw Cotton Used. The mills producing primarily knitting yarns were found to have used cotton higher in grade and longer in staple than any of the other groups. Of the cotton used in carded sales yarns for knitting, it is estimated that 91 per cent was Middling or better in grade, and approximately 97 per cent was 1 inch and longer in staple.

In the case of yarns for weaving, all-cotton yarns for miscellaneous uses, and low-grade yarns for miscellaneous uses, 61, 54, and 13 per cent, respectively, of the cotton used was classed as Middling or better in grade, while 77, 79, and 69 per cent, respectively, was 1 inch and longer in staple.

In the case of strength, fineness, and maturity, there were no particularly outstanding differences among the four groups into which these yarns have been divided.

Processing Information. A review of the estimates with respect to processing specifications and results shows that the knitting yarn mills were on the average using a yarn twist multiplier of 3.60 and a carding rate specification of 8.4 pounds per hour. These compared with average twist multipliers of 4.31 to 4.61 and carding rates of 11.0 to 14.9 for the other yarn groups.

While no data were available from the mills as to their actual picker and card wastes, the results obtained from the laboratory processing of the composited samples of the mill mixes showed the averages of such wastes were 7.6 to 7.9 per cent for the cottons used in the weaving, knitting, and mis-

*From the seventh in a series of reports developed as a part of a broad project designed to help strengthen the competitive position of cotton by providing those concerned with breeding, producing, merchandising, and processing raw cotton better bases for selecting, pricing, and using the qualities and varieties of cotton most advantageous to them and to their customers. Title of the report: "Market Outlets for Cotton in Some of the Principal Cotton Fabrics, Supplement IV—Carded Sales Yarn."

cellaneous all-cotton yarn groups, and 13.3 per cent for the low-grade miscellaneous yarns.

There was also comparatively little difference in the average number of neps in the card web (20 to 21) for three of the yarn groups, but in the low-grade miscellaneous yarn group the number of neps, which averaged 83, was about 4 times as large as for the other groups.

Yarn Strength and Appearance. Count-strength products of the mill spun yarns indicated that weaving yarns and all-cotton miscellaneous yarns were about equal in strength. Knitting yarns contained less strength than weaving yarns, but the differences were attributable to the lesser twists used and the finer numbers spun for knitting. Low-grade miscellaneous yarns averaged roughly one-fourth weaker than yarns representing the other three groups, both for the mill spun yarns and for the standard laboratory yarns which were spun from each mix.

Appearance grades of the mill spun weaving and knitting yarn mixes averaged C+, the all-cotton miscellaneous yarns averaged C, and the low-grade miscellaneous yarns D.

The Outlook. Domestic per capita consumption of cotton in carded sales yarns increased about 20 per cent from 1937 to 1952, due largely to the increase in the production of miscellaneous yarns. In the foreseeable future the production and consumption of carded sales yarns may well continue to increase.

Tips for Making Safety Belt Webbing

PRESENT indications are that within the next four years 7 out of 10 privately owned automobiles will have seat belts while 8 out of 10 company operated or government automobiles will have seat belts installed. So said Ray Hickok, president of Hickok Mfg. Co., when he recently announced the creation by his belt making firm of an automotive safety division which will be responsible for the production and distribution of the new Hickok car crash safety belt.

Right now, he said, two out of the three big automobile manufacturers are offering seat belts as optional equipment. One of the big three automobile manufacturers has announced that seat belts will be offered as optional equipment with all of its 1956 models, Mr. Hickok continued, and the second is expected to make its announcement within a short time.

With the increase in demand by car owners for safety belts will come the need for more webbing with which to make them. Just recently an announcement was made to the effect that over 200,000 feet of nylon-rayon webbing for 25,000 safety belts had been ordered by one of the car manufacturers to launch its program of offering car safety belts as optional equipment.

Narrow fabric weavers considering the production of webbing for this particular end-use may benefit from information contained in a booklet entitled "Automobile Seat Belts—A Way of Living" published by Cornell Aeronautical Laboratory, Inc., Buffalo 21, N. Y., which for several years has been engaged in a study of automobile crash safety.

TO SAVE LIVES a seat belt must be strong enough to withstand severe crashes. Its function is to hold the occupant securely in his seat so that he decelerates or slows down with the vehicle instead of hurtling forward into the instrument panel or windshield when the truck or auto comes to a crash stop.

According to the information contained in the publication, many objectionable points—such as too weak, too wide, too narrow, and too slippery—have been uncovered in tests of belt webbing being marketed by various manufacturers of auto seat belts.

The minimum tensile strength of the webbing should be 1,500 pounds, the Laboratory points out. To assure this strength even after the belt has been used for a period of time, it is recommended that an initial or new tensile strength of 2,250 pounds be provided.

Other suggestions for manufacturers of the webbing itself are:

1. Fabric should be tough enough to resist both normal wear and deterioration and cutting by serrated fittings.

2. Width of belt should be sufficient to insure good distribution of load over the area of the body the belt contacts. As a guide, two-inch width is about right; a four-inch width is too wide.

3. Permanent color is also important since perspiration or wet garments may cause the belt color to run.

4. Compatibility of belt webbing with the buckle and other fittings cannot be overemphasized. Some belts tested show poor matching—webbing usually tests well above required strength; but the belt, when tested with the buckle, slips through the buckle at considerably less than the specified tensile load.

How Kingsboro Dyes Nylon and Acetate Tricots

STAFF PREPARED EXCLUSIVE

KINGSBORO Mills, Inc., is a manufacturer of tricot fabrics for lingerie. The fabrics are knitted at the company's plants in Daisy and McMinnville, Tenn.; about 90 per cent of production is nylon, and the balance is acetate.

All dyeing is done in the plant at Daisy. Most of the fabrics, including 30-, 40-, and 15-denier nylon tricots, 15-denier net, and 55-denier acetate tricot, are dyed on perforated beams in Burlington pressure dyeing machines. A few fabrics, e.g., 15-denier fluting, are still dyed in becks.

All fabrics are two-bar tricot, and are cut into garments at the company's plant in Lafayette, Tenn., as well as at Daisy and McMinnville.

Preparation for Dyeing. After coming from the tricot machines, fabrics are inspected, cleaned, and batched before going to the dyehouse Any stains are removed by spotting.

Batched goods are received at the dyehouse with four pieces to the roll. Average roll weight for nylon tricot is 600 to 650 pounds; acetate averages 1000 to 1100 pounds.

The rolls of tricot fabrics are stored according to type and style, and are taken to the dyehouse as needed on a monorail system.

The first step in preparing the goods for dyeing is to rewind them on a perforated beam. The fabric is run from a McCreary batcher through a wetting - out tank, spreader, and pin tenter onto the beam. The beam is first wrapped with about 22 to 24 layers of cotton tricot fabric to prevent perforation

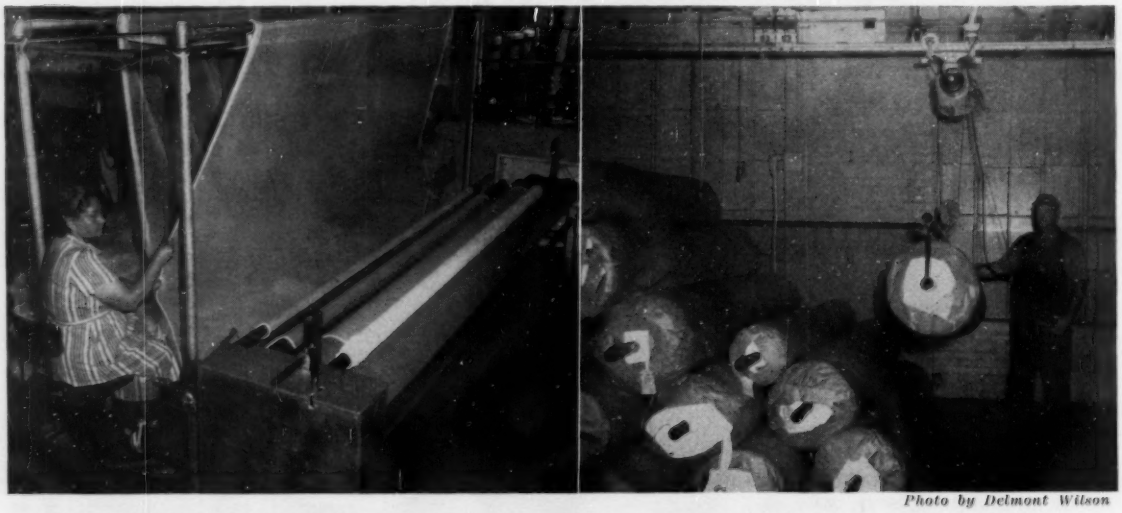
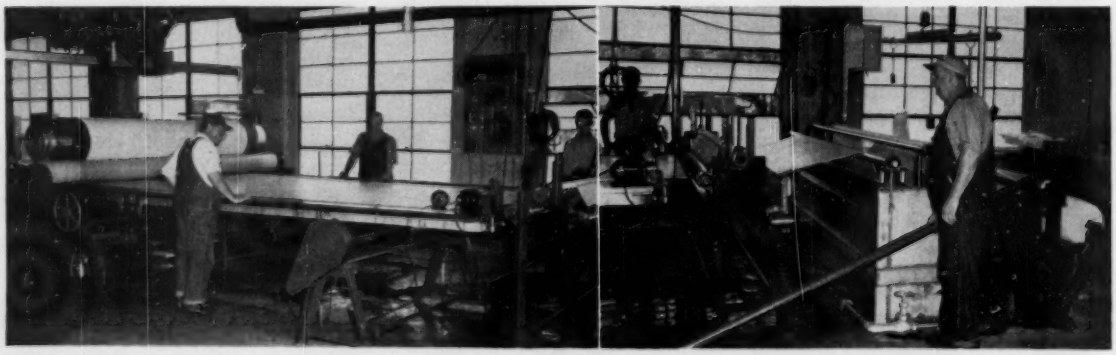


Photo by Delmont Wilson

NYLON TRICOT is inspected, cleaned, and batched on mill-made perch (left) before going to dyehouse. Grease and oil stains are removed by spotting. Right: Batched goods are received at dyehouse with four pieces to the roll, are stored by type and style until needed, then taken to dyehouse by monorail system. Rolls of nylon tricot average 600 to 650 pounds.

FIRST STEP in preparing goods for dyeing is to rewind them on a perforated beam. Fabric is run from McCreary batcher right through a wetting-out tank, spreader, and pin tenter, onto the beam. Beam is first wrapped with 22-24 layers of cotton tricot to prevent perforation marks.



marks on the dyed acetate or nylon.

After the beam is wound it is wrapped with a few turns of tobacco cloth to keep the outside of the roll clean and also to prevent the ends of the tricot from flapping. The tobacco cloth is secured with metal bands at each side of the beam.

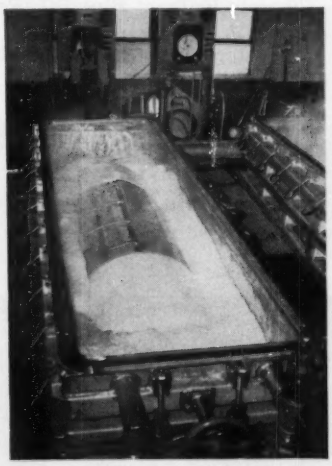
Large beams are also wrapped with screening to prevent sideways slipping of the fabric.

All beams at Kingsboro are the same over-all width, but the width of the perforated area varies, depending on the width of the cloth. Fabrics are wound with the selvages two to three inches beyond

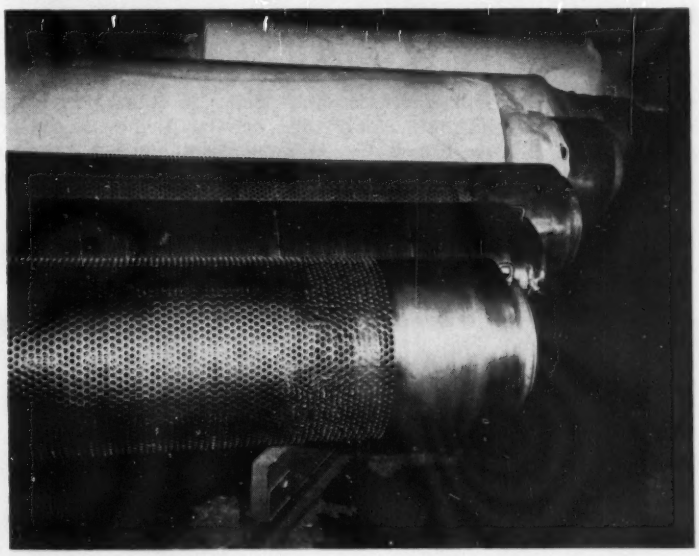
Watch These Points in Dyeing Nylon Tricot

1. Entrapped air will cause spots which are undyed or lightly dyed. Be sure to get all air out of beam before starting dyeing. Throttle machine down until all air is out, then open throttle. There are vents on the ends of the beam to release entrapped air.
2. Keep machinery and other parts which contact cloth clean — prevent dirt, grease, and oil spots.
3. Mix all dye with hot water and a dispersing agent, strain through a fine-mesh screen.
4. Use dispersing agents which don't foam. A pocket of foam around the fabric can prevent dyeing.
5. Watch for leaks on the manifold side of the pump; these will cause the pump to suck air, which will result in spotty dyeing.

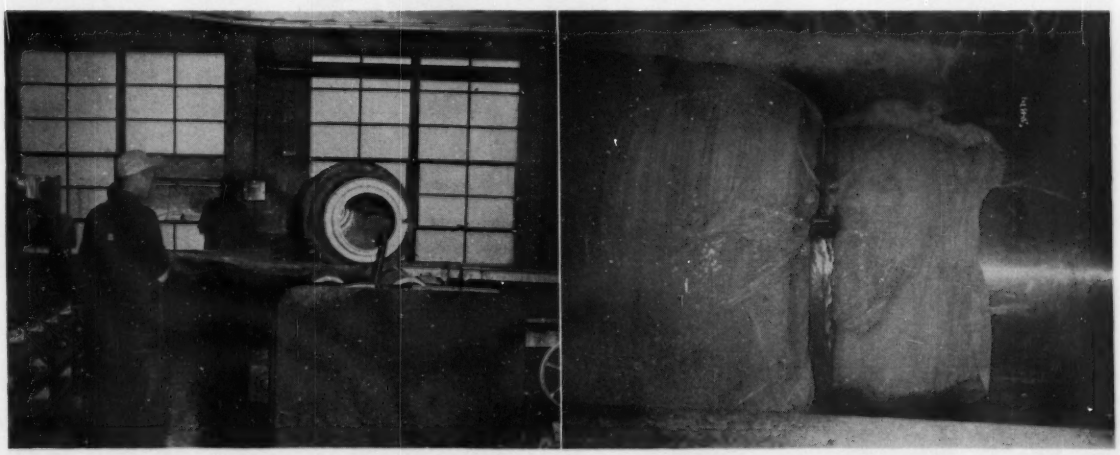
WIDTH OF PERFORATED AREA on beams varies; fabrics are wound with selvages 2-3 inches beyond perforations. If fabric is wound too far beyond perforations, edges will not be dyed; if wound too close, the dye will be forced out the ends without going through the fabric. Most beams have 7/16-inch perforations; beam second from front has smaller perforations, is used for special purposes.

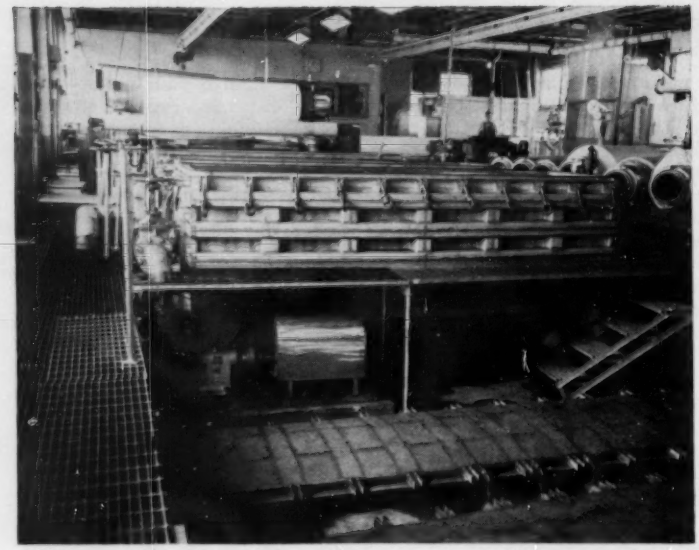


LARGE BEAMS are wrapped with screening to prevent sideways slipping of the tricot fabric.



TRICOT ON BEAM is wrapped with a few turns of tobacco cloth (left) to keep outside of roll clean and to prevent ends of tricot from flapping. Protective cloth wrapping is held at ends by metal bands (right).





TRICOT FABRICS are dyed in Burlington pressure machines.

←

the perforation — if the fabric is wound too far beyond the perforations, the edges will not be dyed; if wound too close to the end of the perforations, the dye will be forced out the ends without going through the fabric. Most of the beams have 7/16-inch perforations; one beam for special purposes has smaller perforations The width of the perforated area is 84 inches, 95 inches, or 110 inches.

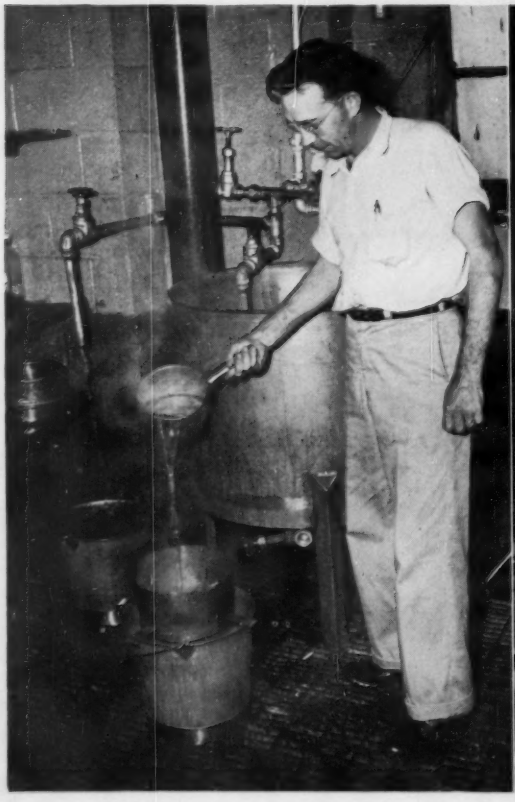
Nylon is not scoured before dyeing, since only water-soluble substances are applied during processing. Acetate is scoured with Burkem 288 and 0.5 per cent soda ash at 160 F in the dyeing machine.

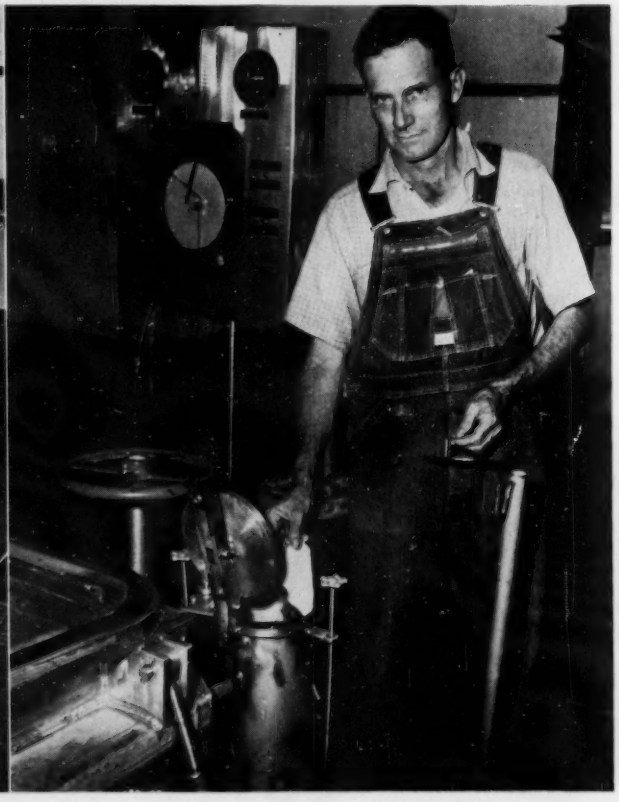
Dyeing. Acetate and acid are the principal dyes used for nylon. Typical dyes used are:

Acetamine Scarlet B (Pr. 244)
Amacel Yellow G (Pr. 242)
Cibacete Brilliant Blue BG (Pr. 228)
Amacid Neutral Red BW (C.I. 275)
Amacid Nylon Black FG
Polar Red RL (C.I 430)
Nydye Black GM

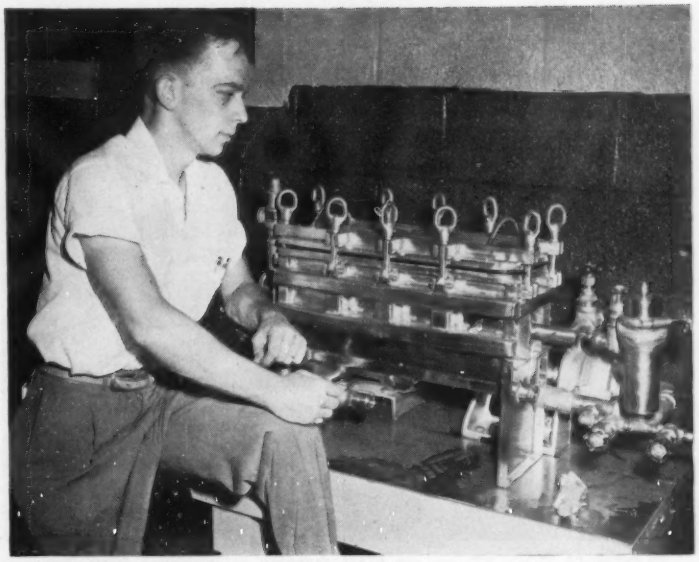
DYES (principally acetate and acid dyes) are mixed with hot water and dispersing agent, strained through fine-mesh screen.

SAMPLE for color matching is dyed in separate tank connected to machine; part of dye bath circulates through it.





SAMPLE-SIZE MACHINE for test dyeings duplicates all details of full-size machine.



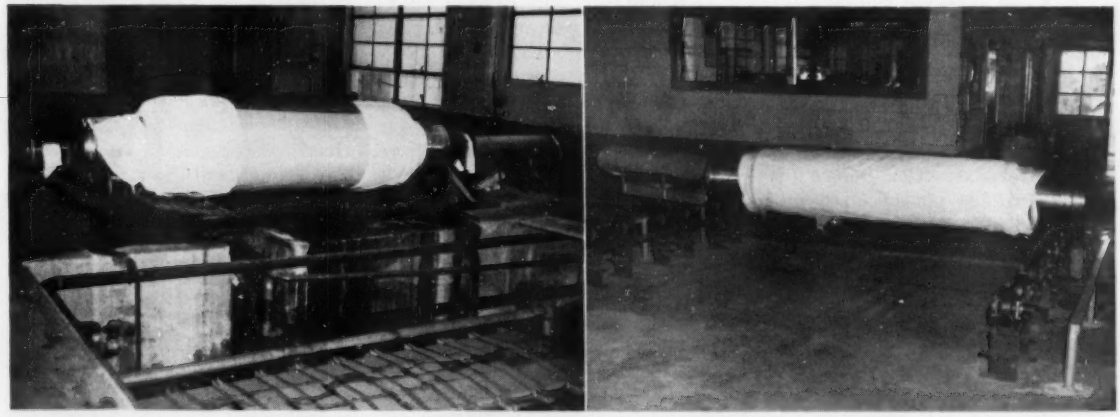
Amacid cyanine G (C. I. 288) for shading

Dyeing procedure with acetate dyes is as follows:

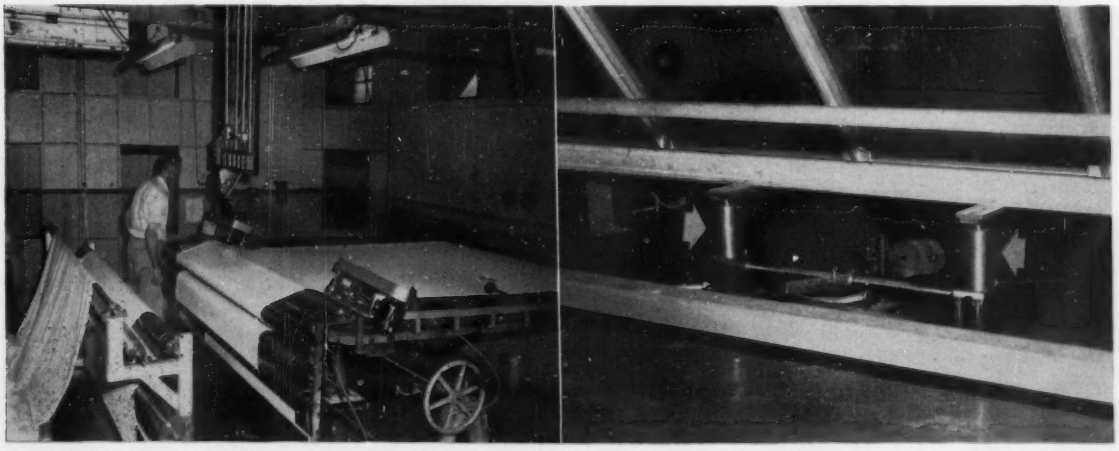
1. Enter goods, fill machine with cold water.
2. Enter leveling (dispersing) agent. Burkem 1273 is used with acetate dyes, Stabilon with acid dyes.
3. Add dyestuff cold.
4. Raise to 180 F.
5. Run 30 minutes.
6. Sample
7. If shade is OK, run one hour at 180 F. All circulation is from inside out.

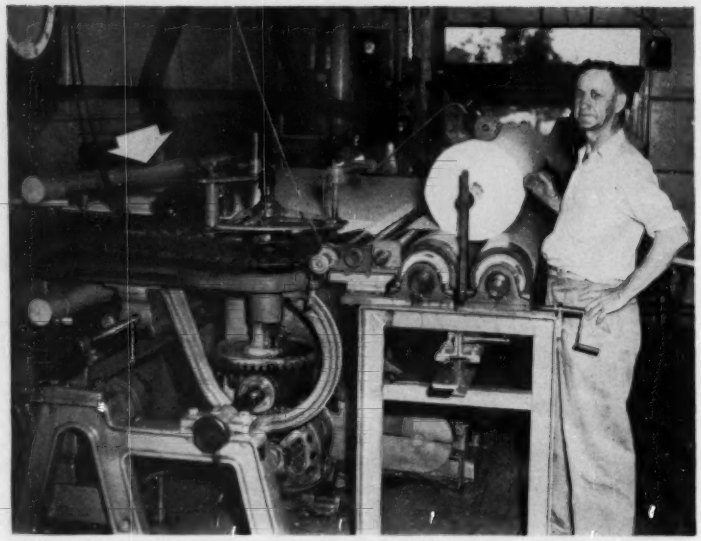
(Please turn page.)

GOODS ARE VACUUM EXTRACTED (left) after rinsing. Extraction takes about an hour; roll is turned over after about 25 minutes. Right: Mill-made device keeps goods slowly turning while waiting to be dried, prevents bars.

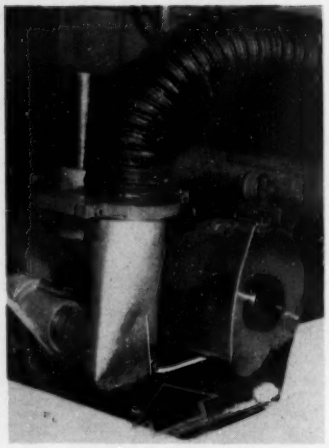


DYED TRICOT is dried and heat-set in one operation (left). Right: Automatic weighing device under scray at tenter starts and stops roll of tricot. When scray contains 15 pounds of cloth, cylinders (arrows) are pressed down, actuating two solenoid switches which stop motor that turns roll. Reverse takes place when scray contains 7 pounds of cloth, and roll is restarted. *Photo by Delmont Wilson*





CLOTH IS COOLED by air blast (arrow) as it comes from heat-setting chamber, selvages are trimmed, and goods are batched.



SELVAGE of fabric is trimmed by knife, cut end is removed by air suction (arrow) and taken to central collecting point.

8. Rinse.

After rinsing, fabrics are vacuum extracted. Total extraction time is about one hour; rolls are turned over after about 25 minutes.

Goods which must wait for some time after extraction before they are dried are placed on a mill-made device, shown in an accompanying illustration, which keeps them slowly turning to prevent bars or water marks.

All white fabrics are dyed with a fluorescent whitening agent (Whitex N), applied in the dyeing machine.

All acid colors are dyed at 230 F.

A swatch from each batch is mounted in a loose-leaf notebook and kept as a permanent record. A swatch is taken before and after each addition, if additions are made.

The cotton tricot and tobacco cloth used to protect the nylon or acetate during dyeing are scoured daily in a beck, to remove all foreign matter. Because of the type dyestuffs used, these fabrics do not become dyed.

Drying and Heat-Setting. Nylon fabrics are dried and heat-set in one run at Kingsboro. Fabrics are entered onto a pin tenter and first dried with hot air at a temperature of about 320 F.

They next enter the heat-setting chamber, where a unit temperature of 720 F and a cloth temperature of 405 F are maintained. Heating is by electric radiant heat. The elements of the radiant heater are automatically raised if the cloth stops.

After leaving the heat-setting chamber, the fabric is cooled by air, the selvages are cut off with a knife, and the cloth is batched.

Acetate is dried on a separate frame, at an air temperature of about 320 F.

National Safety Congress

Motorized Material Handling Symposium Planned for Textile Men

A SYMPOSIUM on in-plant motorized material handling will highlight the opening meeting of the textile sessions at the 43rd National Safety Congress and Exposition in Chicago, October 17-21.

The symposium will be held on Monday afternoon, October 17. Participants will be H. R. Otto, general service superintendent, Otis Elevator Co., speaking on elevator safety; W. H. Nighbert, manager, district sales, Link-Belt Co., on conveyor systems, and Herbert Franhein, chief engineer, Yale & Towne Mfg. Co., who will talk on motorized vehicles.

Three talks on the personnel factors relating to safety will be given at the Tuesday afternoon session. Speakers will be Ottis K. McMahon, industrial psychologist, Atlanta; William A. Hawn, director of training, the Graniteville (S. C.) Co., and Dr. Logan T. Robertson, of Asheville, N. C. The program will conclude with a talk by Grady E. Gant, personnel director, Dixie Mercerizing Co., Chattanooga, entitled, "Ten Ways to Kill Your Mill Safety Program."

Both textile sessions will be held at the Conrad Hilton Hotel. Other Congress sessions will run Monday through Friday at the Hilton and other Chicago hotels.

On Wednesday, Thursday, and Friday mornings, the American

Society of Safety Engineers will sponsor sessions of general industrial interest. Among the topics discussed will be off-the-job accidents, industrial noise control, new ASA standard on accidental injuries, handling industrial wastes, and new uses of isotopes.

The 1955 exposition will consist of 256 booths displaying all types of accident prevention equipment. All exhibit space in the Conrad Hilton hotel will be filled with products, equipment, and services relating to the promotion of safety, health, first aid, sanitation, and general welfare.

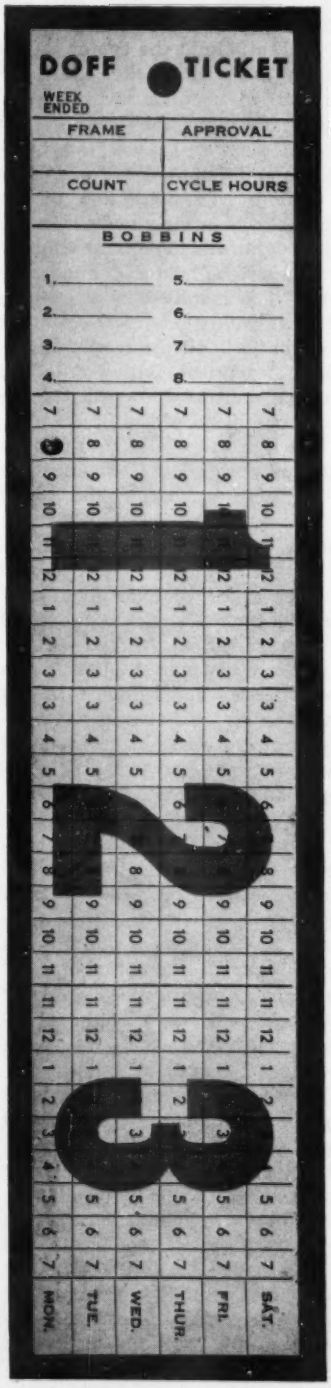
Punch Ticket Keeps Doffs Straight

STAFF PREPARED
EXCLUSIVE

A SIMPLE card form hung at the end of frames in the cotton spinning departments of Amoskeag-Lawrence Mills Inc., Manchester, N. H., is used by doffers to mark the time, shift, and frequency of doffs during the week. The mill's incentive system for doffers calls for bonus payments when the standard number of bobbins per week is exceeded. The cards, marked by hand punch, are collected weekly and sent to the payroll office for tabulation.

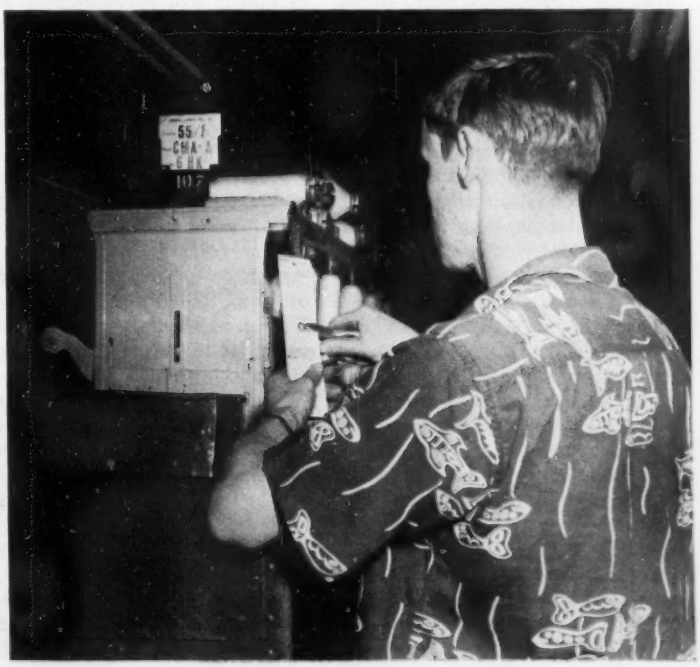
The doff ticket (see accompanying illustration) consists of horizontal columns marked in steps of 1 hour per column to make up a 24-hour period. Six vertical rows of these columns are provided, one each for Monday through Saturday. The ticket is overprinted in the appropriate place with the shift number.

Doffers from each shift pick the ticket from the frame-end hook just before making the doff, and punch the number representing the nearest hour to the time of doffing, in the row for that day. Each doffer has a punch that makes a different shaped hole.



DOFF TICKET covers a one-week period, has horizontal rows for each hour in a 24-hour period and vertical rows for each day of a 6-day week.

JUST BEFORE making the doff, doffer punches the ticket at the coordinates of the nearest hour in his shift and the proper day.



Attachment for Producing Novelty Effects

BY STEPHEN E. ZIAK
EXCLUSIVE

THAT FLEXIBILITY is given to woolen mill operations and more individuality is given to novelty yarns and fabrics when a plant develops and manufactures its own fancy yarns is a well established fact. Today, with the attachments for wool cards and twisters available from the machinery manufacturers and those devised by mill men and described in textile magazines from time to time (see TEXTILE INDUSTRIES for August and September, 1947, p. 101 in each instance, or TI's *Woolen and Worsted Manual*), there is no limit to the variety of novelty effects which can be produced.

Here is the description of a simple attachment for wool cards which can be made in the most modest mill machine shop. With it rovings for single novelty yarns such as flake or splash and nub or knicker yarns may be manufactured. And, of course, from these yarns and other ordinary yarns ply novelty yarns of several types can be made at the twister.

How to Make a Novelty Attachment for Wool Cards. Refer to the accompanying sketch when reading this. The boldface numbers in parentheses correspond to those on the drawing.

Make a stand for two roving barrels or reels, one above the other, and bolt it to the finisher card in such a position that the roving ends from both barrels can be, if desired, conveniently fed simultaneously to the stock being carded at the first worker above the fancy.

Use 2½″ or 3″ angle iron to make the uprights **(1)**, length of which is determined by the measurement of the distance from the fastening point on the side of the card to a point about 12″ above the topmost or middle worker on the cylinder.

Fasten two angle iron stands **(2)** onto each of the uprights to serve as bases for the top and bottom barrel shaft bearings.

Install ½″ screw-on-cap bearings **(3)** on the stands.

Make two barrels or reels **(4)** out of wood to conform in diameter to the barrels of the jack spools on the card winding frame. Diameter of these barrels should conform to the width of the card cylinder.

Insert ½″ shafts **(5)** with collars **(6)** on each end of the barrels to ride on the angle iron stand bearings. These shafts should be long enough to extend from the ends of the barrels to a point directly above the ends of the worker roll shafts for driving purposes.

Spare stripper rolls may be used for barrels, in which case fancy filleting is wound on spirally so that the barrel size will conform to the size of the jack spool barrel. Of course, if stripper rolls are used, the ½″ stand bearings specified above cannot be utilized — get bearings to accommodate the stripper roll shaft.

When preparing to use this attachment, transfer roving ends (of appropriate colors to produce the flakes or nubs desired in the yarn) from the jack spools on which they were wound by the card condenser onto these barrels.

If the card is 72″ wide, this attachment will accommodate up to 72 roving ends **(7)**, or as many as 36 on each barrel. An advantage of this arrangement is that from one to 72 colors of roving can be added at one time to the stock being carded.

It is also possible to use full jack spools of roving as they come from the card condenser for feeding irregularities to the stock being carded. This may be accomplished by fastening with set screws ½″ diameter shafts with collars to the spindles on both ends of the jack spools.

Use a ratchet and pawl arrangement for driving the bottom barrel or jack spool. Note: When it is desired to feed from both barrels at the same time, the top barrel is belt-driven **(8)** from the bottom by means of two pulleys of equal diameter.

Either a loom pick gear and pawl or a mule bobbin building gear and pawl may be used for making this drive mechanism. The drive pulley **(9)** for the ratchet and pawl may be made from round cold rolled steel or cast iron and should have a 1″ wide face and should be 6″ in diameter.

Drill a hole in the center of this pulley to fit the worker shaft. Also drill at random several 5/16″ holes through the pulley and thread them with a ⅜″ tap, bearing in mind that these will have a part in the regulation of the flow of the roving ends into the card. Onto that face of the pulley which is to be nearest the machine when it is installed on the worker shaft, weld a set-screw-equipped hub that will fit the worker shaft. Then fasten the pulley onto the worker shaft as shown in the accompanying sketch.

Through the eye of a 5/16″ rod **(10)** insert a ⅜″ x 1½″ cap screw fitted with a washer and screw it into one of the holes in the drive pulley.

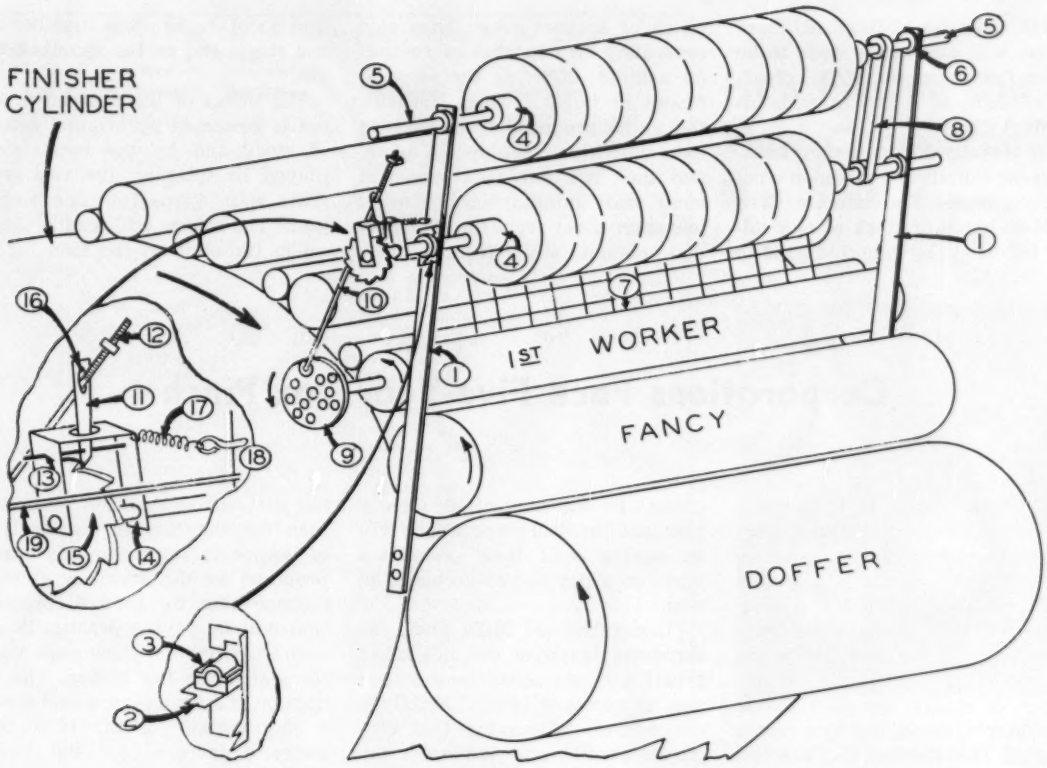
Length of the 5/16″ rod should be such that it extends about 6½″ beyond the ⅜″ hole in the pawl **(11)**. Also, thread this rod **(12)** for a distance of about 7″ or 8″ down from the tip and screw on a nut and washer. This thread has a direct bearing on the movement of the pawl in regard to the hole being used as a swivel on the worker driving pulley.

Loosely pin the pawl to a two-prong fork **(13)** made by inverting a U-shaped piece of flat iron. Dimensions of the fork are governed by the size of the ratchet gear used. At a point about ⅜″ from the bottom of each prong of the fork, drill a ½″ hole to accommodate the bottom roving spool shaft **(14)**.

Fit the ratchet gear **(15)** and fork onto the bottom roving spool shaft as shown in the drawing, with the pawl meshing into the ratchet gear.

Drill a ⅜″ hole **(16)** through the pawl near the top to permit the 5/16″ drive rod to pass freely through it without binding.

Since the worker turns in a direction away from the condenser or toward the feed box, this ar-



rangement enables the pawl to pull the ratchet gear and thus feed roving from the spool or spools to the stock being carded.

Two adjustments are provided for regulating the length of stroke of the ratchet: (1) the various holes in the drive pulley which serve as pivot points for the rod that actuates the pawl, and (2) the adjusting nut on the rod.

The spring **(17)** serves to pull back the pawl on the ratchet in preparation for the next stroke. One end of the spring is fastened to the fork through a ¼" hole drilled near the top as shown. The other end is fastened to a 3/16" eye bolt **(18)** mounted on the nearest upright.

The back-lash of the pawl on the reverse stroke of the worker is governed by a bumper made of ⅜" rod **(19)** extending from the upright as shown.

It is sometimes advantageous to insert the rovings at the second or third worker of the finisher cylinder, instead of the first. This can be done with the attachment described here by installing a bracket on the uprights that extends to a point over the worker selected for feeding the rovings. Simply move the drive pulley to a worker that is a little farther back.

Ways to Insert Felted Nubs. Felted nubs may be inserted at the finisher cylinder by means of a nub box mounted over the finisher cylinder and driven by means of sprockets and a chain from the finisher doffer shaft.

A slat type feed table apron may be erected over the finisher on an angle iron framework and driven by belt and pulley from the worker shaft. This slat apron is fed by hand from a platform built over the finisher doffer. Nubs or other irregularities may be fed with satisfactory results in this manner. The speed of the feed table is controlled by change pulleys employed on the worker and slat apron shafts which, in turn, govern the amount of irregularities fed to the cylinder.

Nubs or other irregularities may also be added at the breaker doffer by means of a slat feed table built over the doffer, fed by hand and driven from the doffer shaft.

The farther back the feeding mechanism is located, the more carding these irregularities receive. Therefore, the size and shape of the irregularities is altered considerably in the carded sliver. Irregularities which are fed to the card finisher pass through the tapes of the condenser and are cut up and divided among the roving spools of the winding frame. This process tends to mix the irregularities of the carded sliver in different forms and shapes. Yarns passing through spinning, winding, spooling, and dressing are mingled and intermingled in process. This mixing process is beneficial to the finished product of the loom, irregularities showing up at random in size, shape, and color.

Another method of creating novelty yarns is to feed ribbons of colored yarns directly to feed rolls of the finisher cylinder from a ball and creel set-up. The tapes divide the color among spools of roving, stealing parts of each color in the process. On cards equipped with ring doffers, a side-

to-side traverse motion of these doffers will also cause stock to be stolen from opposite rings, creating a blend of colors in each individual sliver.

Ply Novelty Yarns. Fancy woolen yarns can also be made on wool spinning mules. For example: Card a 100-lb batch of stock of one color, followed by another 100-lb batch of another color. Then spin separately two batches of rovings on a mule, inserting the same amount of twist in each. Transfer the yarns produced from bobbins onto individual jack spools again, and then run two jack spools of spun yarn simultaneously, using one spun sliver from the top spool and one spun sliver from the bottom spool, to be spun together as one single end on the spindle bobbin.

The effect of the finished product is governed by original colors of stock and by the twists employed in spinning the two separate spun yarns into one single yarn. The effects will readily show up in the cloth at the loom.

Corporations Face Five-Year Tax Pinch

THE 20,000 biggest U. S. corporations supplying 85% of government's revenue from corporate income taxes face a progressive pinch on their resources equivalent to a 10% increase in taxes every year for the next five years, Roy S. Good of Touche, Niven, Bailey & Smart, certified public accountants, points out in a recent issue of *The Journal of Taxation.*

The 1954 Code provides for payment in the last four months of the taxpayer's taxable year of a progressively increasing proportion of that part of a corporation's tax exceeding $100,000 based on the estimated tax, according to Mr. Good. For the year ending before December 31, 1956, 10% of the estimated tax is due in the taxable year, but the proportion increases by additions of 10% every year until in 1960 corporations will be paying half their estimated taxes on a pay-as-you-go basis, he said.

"Under the old Mills plan, the corporate taxpayer did not make actual tax payments in any one year in excess of 100%," Mr. Good commented. "Assuming that corporate profits and tax rates remain level, acceleration of corporate tax payments under the 1954 Code will mean actual payments of approximately 110% in each of the five taxable years with no corresponding reduction in payments in subsequent years."

"In the light of what has gone before, it is fairly easy to speculate as to what might happen come 1960," said Mr. Good. "It is not difficult to envision a similar plan for the further acceleration of corporate tax payments being proposed by the Treasury at that date so that by 1964 a corporation will be paying practically its entire tax liability during the year for which the tax is due. The adoption of such a plan would mean a continuation of the 10% tax payment increase for the years 1960 through 1964."

As the amount of estimated tax payable within the taxable year increases, both the financial burden with its drain on the cash position and the "compliance" burden, necessitating reasonably accurate income forecasting to keep the financial burden to a minimum, will become important, Mr. Good predicted.

Wet Processing Fabrics Containing Metlon—Mylar Yarn

STAFF PREPARED

EXCLUSIVE

ALUMINUM-BASE yarns now being laminated with Mylar* film have opened up new end-uses for metallic yarns through resistance of both laminating film and adhesive to high temperatures and most textile chemical concentrations. Also, because the lamination seals off the aluminum, sensitivity to concentrated alkalis of this metal is no longer a problem.

One yarn of this type, Metlon Corporation's Metlon-Mylar (TI for Feb., 1955, p. 199), has undergone a comprehensive laboratory evaluation through the facilities of Sandoz Chemical Works. Such processing as boil-off in all wet processing systems, cotton bleaching, vat and direct dyeing, and wool carbonizing and bleaching have been studied and procedures established.

Although these procedures, listed in the box on next page, are based on Metlon's best knowledge, information, and experience and are believed to be accurate, the company accepts no responsibility for results obtained with the procedures since mill-to-mill conditions can vary considerably.

Copies of these procedures and procedures for cross dyeing can be had on request from the Metlon Corporation, 432 Fourth Ave., New York 16, N. Y.

*Du Pont's polyester film

Wet Fiber with Metlon/ Mylar	Wet Process	Concentration	Chemical	Time Minutes	Temp. °F
Processing Fabrics Containing Metlon/Mylar Yarns					
Cotton	Boil-off	4% 1%	Soap Soda Ash	30	200
	Mercerizing	30%	Caustic Soda Solution	5	Cold
	Bleaching	6%	Available Chlorine Per Liter or 20.0 cc Hydrogen Peroxide, 3.0 cc Sodium Silicate, 2.5 cc Ammonia, Per Liter	60	110
	Dyeing, Direct (typical formula for Coral)	1.00% 0.25% 0.04% 20.00%	Pyrazol Fast Red Brown 3 RUL Pyrazol Fast Red 6BL Lumicrease Orange 3 LG Common Salt	60	200
	Dyeing, Vat (typical formulas)	8 oz. Per Gallon	Sandothrene Brilliant Green NBF Dble. Paste Ultrasperse Turquoise Green		
		10 oz. Per Gallon	Sandothrene Dark Blue NBO Paste Ultrasperse for Pansy		
		30 oz. Per Gallon	Sandothrene Black NDRB Paste Ultrasperse for Black		
	Dyeing, Vat (pad-jig procedure)	3 oz. Per Gallon 3 oz. Per Gallon	Sodium Hydroxide Sodium Hydrosulfite	20 in Jig	160
Nylon	Boil-off	2% 1%	Sandopan TN (standard wetting agent) Caustic Soda	30	200
	Bleaching		20.0 cc Hydrogen Peroxide, 3.0 cc Sodium Silicate, 2.5 cc Ammonia, Per Liter		
	Dyeing (typical formula for Sea Green)	0.20% 0.80% 1.00%	Lanasyn Yellow 2RL Lanasyn Green BL Ekaline F	60	200
Wool	Boil-off	4% 1%	Soap Soda Ash	30	120
	Carbonize		Standard Procedure		
	Bleaching		20.0 cc Hydrogen Peroxide, 3.0 cc Sodium Silicate, 2.5 cc Ammonia, Per Liter		
	Dyeing (typical formula for Slate Grey)	0.50% 0.06% 0.04% 0.02% 10.00%	Lanasyn Grey BL Lanasyn Green BL Lanasyn Yellow 2RL Lanasyn Bordeaux RL Glauber's Salt	60	200
Viscose	Boil-off	2% 2%	Sandopan TN (standard wetting agent) Glauber's Salt	30	200
	Bleaching		20.0 cc Hydrogen Peroxide, 3.0 cc Sodium Silicate, 2.5 cc Ammonia, Per Liter		
	Dyeing, Direct (typical formula for French Blue)	0.32% 0.12% 0.04% 10.00%	Lumicrease Grey 3LB Pontamine Fast Blue BLL Lumicrease Yellow EFUL Glauber's Salt	60	200
	Dyeing, Vat		As For Cotton		

He's Finding Out How Comfortable Her Suit Is

NAVY TEXTILE scientist Jack J. Press is shown here conducting a humidity test to determine the body comfort of an experimental Wave exercise suit. Miss Jean Paterson, also employed at the Naval Supply Activities at 29th Street and 3rd Avenue, Brooklyn, cooperates in the test by bicycling on the exercise machine.

She is connected to the electronic humidity indicator which measures the humidity created at various levels and lengths of activity. The data collected reveal the "comfort point" of the garments she is wearing and aid in developing new fabrics.

This humidity sensing device is a new instrument developed by the Research and Development Division, Clothing Supply Office at the Naval Supply Activities headquarters. Its miniature size, high sensitivity, and wide range for the first time make possible the practical determination of relative humidity (moisture) on skin surface and between layers of clothing, according to an announcement from the Polytechnic Institute of Brooklyn where Mr. Press is visiting instructor in textile structures.

Here's How to Check Your System When

On most jobs compressed air is worth many times its small cost. But wastage can run the bill much higher than is really necessary.

BY R. J. NEMMERS
Ingersoll-Rand Company
EXCLUSIVE

GIVE 'EM AIR. Pneumatic power tools, like the one this fixer is using to drill the head end frame on a face drive twister, can substantially reduce downtime and operator fatigue so long as enough air is provided for their operation. A drop in pressure from the required 90 psi for most tools to, say, 70 psi can cut the power of some tools by as much as 30 per cent.

TEXTILE men have long relied on compressed air to solve some of their more perplexing problems in cleaning, maintenance, and control. On the whole they've found it to be economical; but, in these days of higher costs and changing markets, many have been taking a sharp look at their compressed air costs as one of many possible ways of reducing overhead. And quite a few have found they were wasting good hard dollars just as surely as if they were throwing away bolts of finished goods.

Let's take a plant engineer named Mike. We'll assume that Mike is producing and using his compressed air economically — that is, he has good quality compressors and efficient tools, controls, and other air-using devices. But he feels that costs are still too high and suspects his distribution system.

What can he do?

The first thing is to find out if he really is wasting compressed air power.

Sources of Waste. There are two sources of waste, both almost equally responsible for unnecessary compressed air costs. One is leakage; the other is abnormal pressure drop.

Mike is a sensible man and would no more consider uselessly venting to atmosphere more than 10 per cent of his compressor capacity than he would throwing away every tenth bolt of cloth his company produces. But, if his system is as far below standard as some, that's exactly what he is doing.

The loss through any one leak may be small, but cumulatively they can really add up.

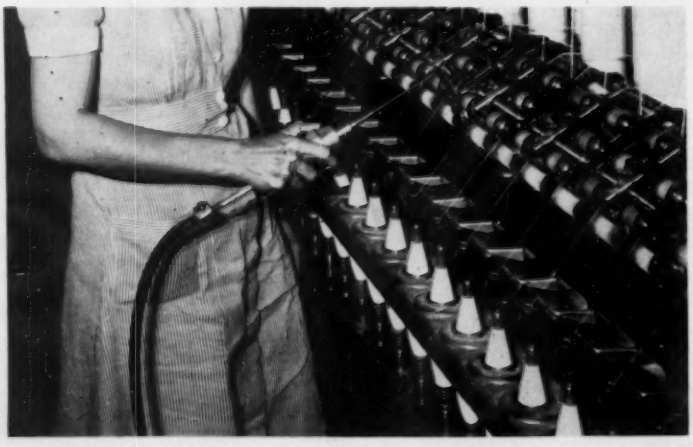
The same is true of pressure drop. The loss through any one fitting that is too small may be almost negligible, but if Mike sums them up he might find that it takes from 10 to 30 per cent of the pressure generated in his compressors to push the air through lines to points of use.

There are reasons why many air systems are in this state of disrepair.

Leakage is tolerated because it is not immediately damaging to plant operations. Air does not condense and drip on machines and material as does steam, and it is not visible when it escapes. Nor does air have an odor and create an explosive hazard as do combustible gases. Compressed air leaks do not blow a fuse as do electrical "leaks" or short circuits. In short, most leaks are not immediately apparent and thus escape attention for a long time.

Excessive pressure drop, outside of that caused by leakage, is due solely to faulty design of the system. During war years many lines were extended and many new items of equipment added with little or no thought as to the ability of the system to carry the added load. Like Topsy, they "just growed." Chances are that many of the pipes have far too many sharp bends and are even much too small. Hoses are probably too small and are equipped with fittings (spuds, nipples, menders, etc.) that just can't carry the load they should.

SELECT THE RIGHT HOSE for roll pickers and similar pneumatic devices. Size should be such that an air pressure drop of not more than 5 psi is obtained when full power is being developed by the connected tool. Keep hose lengths as short as possible. Where long runs are necessary, use a large diameter supply hose and short smaller hose or "whip" at the delivery end.



Cost of Compressed Air is Excessive

The Real Cost of Wasted Air. It is very obvious that the first cost of wasted air is the cost of the air itself. A one-eighth inch opening can waste about $65 worth of 100 psi air per month based on the average mill cost of $0.09 per 1000 cubic feet. And that figure doesn't include the charges for wear and tear on a compressor that's working overtime to make up the deficit.

But the real cost, the cost that can justify expenditures to bring the system up to par, is the one that affects production. Air power is very cheap when compared to what it does; it can multiply operator productivity by a factor of from two to many hundreds. Even if as much as 1000 cubic feet of air are used hourly for each employee in the mill, the proportion of air cost to labor cost is in the neighborhood of only 1 to 20.

To get back to Mike's plant, suppose that he has one operator whose output can be increased threefold through proper use of compressed air. But, if that employee isn't getting a good air supply, his output won't be at a maximum and he can't produce what he is being paid to do. Or assume that a fixer is equipped with pneumatic power tools to ease his labor and reduce downtime. If those tools don't get enough air, their power can be cut drastically. (A drop in pressure from the required 90 psi for most tools to, say, 70 psi can cut the power of the tool by some 30 per cent.)

Consequently, all of the time saving advantages of air power are not being obtained, and that is the real cost of compressed air wastage and the most important. In monetary value it is many times greater than the cost of the air itself.

How to Determine Waste. As we said, the first thing for Mike to do is to see how much air power is being wasted — to see where he stands now.

He should record during several periods of heavy use the air pressure at the main receiver. Let that be called measurement **a.** He should also measure at the same time the pressures at the ends of branch lines — designate that reading **b**. The last one, **c**, is also a pressure recording and must be taken right next to the point of use while the tool or device is operating.

The recorded pressures **a** and **b** should not differ by more than 5 to 7 psi; **a** and **c** by not more than 10 to 12 psi. If they do, Mike will know that he is wasting more in production dollars than a complete revamping of his system would cost.

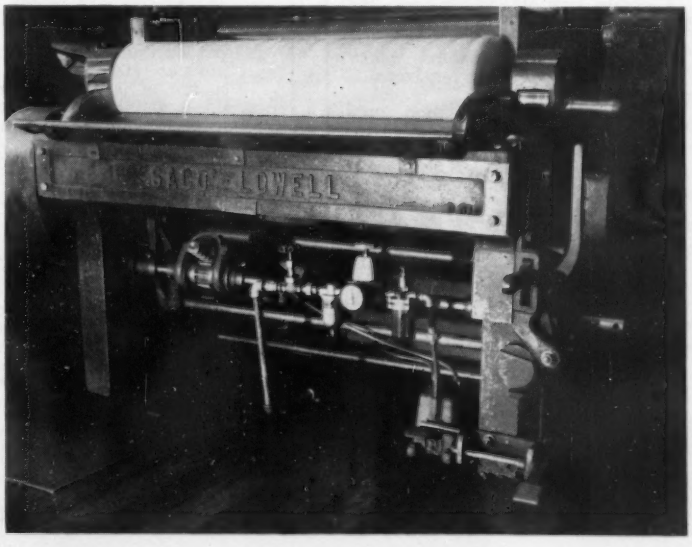
Where Is The Waste? To correct the deficiencies in his system, Mike first has to know whether his loss is from leakage, from pressure drop, or from both. The next thing for him to do, then, is to record during several peak hours the time his compressor runs at full load, each degree of part load, and at no load.

Mike will find a recording (curve drawing) wattmeter or ammeter handy for electrically driven compressors, because the load points and operating time will show up clearly on the chart. For steam-driven machines he can record revolutions on a totalizing counter.

Then, from those data and the

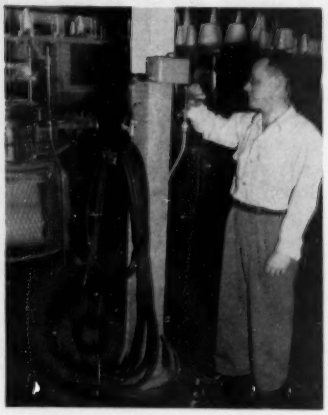
KEEP HOSE OFF THE FLOOR. It's safer and prolongs the life of the hose. A reel mounted high on a post is the method utilized in the slasher room pictured above. Note the three shut-off valves in the air line.

INCORPORATE strainers and lubricators right into the piping for all pneumatically operated devices, just as was done in the case of the pneumatic lap rack control shown below. The condensate trap can be seen in the air line between the hand-operated shut-off valve and the air pressure reducing valve. To the right of the reducer is the air line lubricator.



RUNNING DOWN LEAKS in air lines can present quite a problem. One method is to inject an odor into the air lines and back it up with normal system pressure. Then finding leaks becomes just a matter of following your nose.

CIGAR SMOKE is the medium utilized by at least one man for detecting leaks in air lines. He tramps through his plant exhaling huge clouds of smoke at every valve and fitting within reach and, as he puts it, "if it blows it back at me, I circle the offender with yellow chalk for immediate attention."



PROVIDE SHUT-OFF VALVES on all feeder lines so that pneumatically operated devices need not be left "live" on the line. Have operators close valves when equipment is not in use.

compressor full load rating (actual delivery, *not* piston displacement), he can calculate the average amount of air he now is using. By doing the same thing when no air is being used for production — say during a week-end or even a noon-hour shutdown — he can get the amount of air being wasted. Of course, normal pressure must be maintained in the system.

Dividing the air loss by the average air use will give Mike a percentage figure that tells him how much work will have to be done to correct the condition. If it's less than 5 per cent, he's in wonderful shape. If between 5 and 10 per cent, chances are that a little corrective maintenance will do the job. But, if it is over 10 per cent, he will know that he has to get right down to work and find leaks.

Running down leaks in air lines can be quite a problem, especially

TABLE 1
The Most Common Places For Air Leaks To Occur

Check:
1. Valve stem packings
2. Plug cocks (look for worn mating surfaces)
3. Valves on tools (Tools and other equipment should not be left live on the line but usually are. Try to get men to shut them off when not in use and provide shutoff valves for that purpose.)
4. Hose connections (Standardize on good hose clamps. Makeshifts cause leaks and can be dangerous.)
5. Blow guns (Get good ones. Homemade types usually leak or are left partially open. If possible, reduce air pressure to them—it's safer and also saves air.)
6. Air hose (look for punctures and cracks)

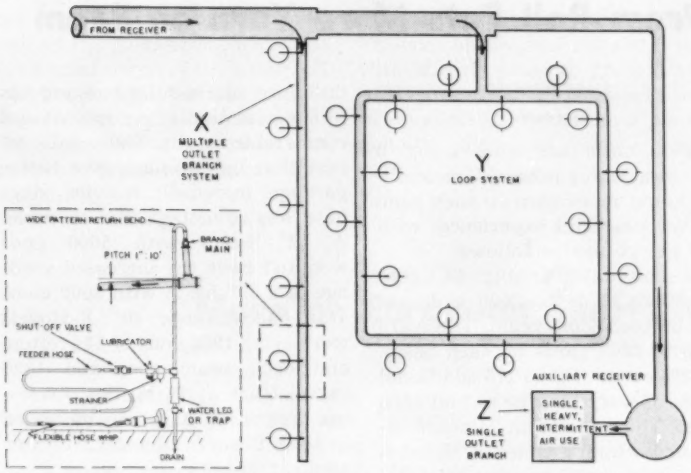
TABLE 2
Common Causes of Low Air Pressure

Check:
1. Leakage (always check this one first)
2. Improperly sized hose, pipe, and fittings
3. Too many sharp bends in lines
4. Crushed or kinked hose

TABLE 3
Standards of Air System Design

1. Receiver take-off should be from a point well above the bottom. Lines from this point should slope in the direction of air flow and have a minimum pitch of one inch in ten feet. This is to carry condensed water vapors to sumps and traps for removal. The latter should be installed in every low point in the system.
2. Main lines should be sized for average air flow with a maximum of 3 psi pressure drop.*
3. Branch lines must be sized for maximum flow which may be as much as 175 to 200 per cent of the average flow, depending on the number of outlets in use at any one time. Hold the pressure drop below 3 psi.*
4. Feeder lines from branches to operating floor and user connections are sized on the maximum requirements of as many devices as are in use at any one time.
5. Hoses should be sized for not more than 5 psi drop when full power is being developed by the connected pneumatic device. Keep hose runs short. Where long ones are necessary, use a large diameter supply hose and a short smaller hose or "whip" at the delivery end.
6. Always take feeders off the top of branches and mains. This prevents water from carrying over into the feed line. Incorporate strainers and lubricators for all tools right into the piping. Keep strainers empty and lubricators full.
7. Never use piping, fittings, or hose of a smaller diameter than the opening or fitting furnished with an air operated device in the line supplying that device. Follow the manufacturer's recommendations.
8. Keep hose off the floor — provide brackets to keep it out of harm's way. Have a shut-off valve handy for each connection.
9. Use welded fittings wherever possible, also long radius bends. The first cuts leakage, the second reduces pressure drop.

*For tables of pressure drops through hoses, fittings and pipe, refer to: *Compressed Air Data*, copyright, Ingersoll-Rand Company; *Compressed Air Handbook*, copyright, The Compressed Air and Gas Institute; or to manufacturer's data sheets.



THREE TYPES OF AIR DISTRIBUTION SYSTEMS: X is a multiple outlet system with a dead end. Two of these can often be coupled to form a loop system like the one shown here at **Y**. A method for coupling in an auxiliary or airline receiver is shown at **Z**. The expanded view at lower left shows the correct way to design a feeder line.

CONDENSATE TRAP GOOD INVESTMENT. The condensate trap in the air line to which the hose being used here for blowing-off looms is attached soon paid for itself. Not only does it save air by eliminating the necessity for the operator to blow the line out to clear it of water, but it also prevents his wetting the looms and yarn being woven should he forget to rid the line of water before starting to blow-off.

in noisy plants where the hiss of escaping air can't be heard. Mike can fall back on a couple of methods which have proved handy to other plant engineers.

If safety rules don't interfere, he can hold a candle close to suspected leaks. If there is one, the flame will flicker and may even be blown out.

Another method which can usually only be used during a plant shutdown is to inject an odor into the air lines and back it up with normal system pressure. Then finding leaks becomes just a matter of Mike's following his nose.

A soapy solution painted over a leak will result in bubbles, and this method is frequently recommended where open flames are not tolerated.

A cigar-smoking contemporary of Mike's tramps through his plant exhaling huge clouds of smoke at every valve and fitting within reach and, as he puts it, "if it blows it back at me, I circle the offender with yellow chalk for immediate attention."

Where does Mike look for air leaks, you ask. Well, experience has taught him that they most frequently are found at points indicated in Table 1.

Another good way to save air is to install condensate separators and traps. They eliminate the need for operators to blow lines to clear out water. They also save maintenance on tools because moisture can destroy lubricant films and cause unnecessary wear and tear. Moisture in control circuits, of course, is never permissible.

If leakage is not a factor and if there is adequate compressor capacity and pressure at points of use is still low, there are too many restrictions to the flow of air. Common causes of low air pressure are presented in Table 2.

Hints On Design. Condensed in Table 3 are recommendations for efficient air system design. Here are some other suggestions.

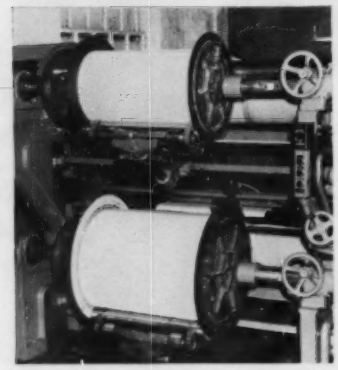
In designing or remodeling his system Mike must remember that the installed cost of the next size larger pipe is only slightly more than that of the smallest adequate line. He should plan now for the future; it will save money in the long run.

Another useful idea for him to bear in mind, and one that will increase system capacity in greater proportion to expense than many other methods, is to use the old lines to carry the base load and run parallel lines to take care of peaks and new additions. He should connect the old and new lines together at the delivery ends to form a loop. This provides two-way air flow to points of heaviest usage.

When designing a new system, it is best to build in loops at first. Also examine old lines to see if loops can't be made simply by connecting two or more together. Interconnecting lines which run down opposite sides of a building will frequently boost the available power at points of use to acceptable values. If there are points of intermittent heavy demands in Mike's system, he can store power right where it is needed by installing simple airline receivers.

Another important thing which Mike must remember is that once his system is up to par, he can't just walk away and forget it. Once he substitutes a good preventive maintenance program for helter-skelter practices, however, he can relax, knowing he's getting all the air power his company is paying for. By carefully checking lines for the ability to carry new loads before the load is imposed, Mike will be able to keep his system in good shape and get better production because of it.

Traversing Slasher Press Roll Puts More Yarn on Beam



PRESS ROLL ON DOUBLE BEAM SLASHER. These unique installations of the traversing press roll mechanism have been applied to a double beam slasher head end along with a multi-motor drive.

STAFF PREPARED

EXCLUSIVE

MANY mills are now using a traversing press roll on slashers to put more yarn on each loom beam. Some mill experiences with this device are as follows:

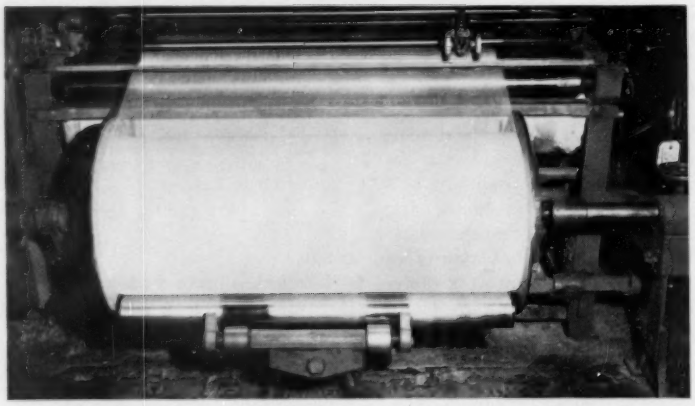
In one mill running 40″ constructions, 1700 to 2600 ends are run on each loom beam. There are 1800 to 2200 yards on each beam. On 22s cotton, 125 to 175 additional yards of warp may be put on each beam. This adds about 24 hours additional running time on Model-E looms with 22″ beam heads.

Light Sleys Give More Yardage Increase. Several South Carolina mills are successfully running 13s to 60s with similar equipment and comparable results. These mills report that lighter sleys give better yardage increases; heavier sleys have less advantage. For example: A 50″ beam with 5000 ends wouldn't have the increased yardage of a 50″ beam with 3000 ends.

In one instance 40″ X-Models were using 1950 ends of 14s cotton, and each beam contained 1320 yards. Upon applying the traversing presser, yardage was increased to 1470. Beam head was 22″ in this application.

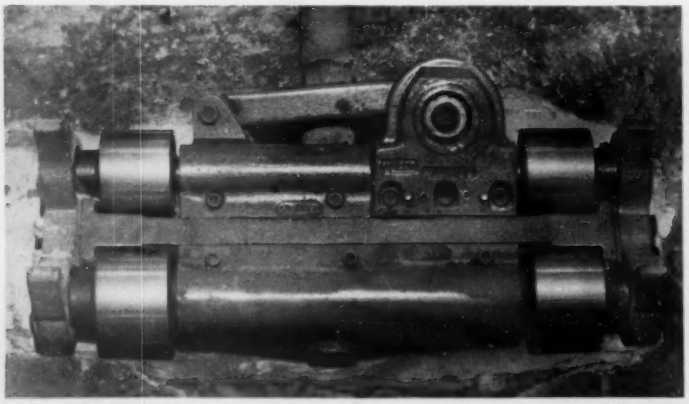
In these instances the accessory has been in use 2 to 4 years. No maintenance has been necessary on these installations on two-cylinder slashers and three-cylinder slashers. The worm is lubricated about once a week, requiring a minimum of attention.

In one mill warps formerly ran 10 days. Upon installing the traversing press roll, every 24 hours there were 3.3 fewer warps tied on. This mill formerly averaged using 41 warps a day—now averages 37.7 warps per day.



PRESSER ROLL rests on traversing mechanism and gently compresses warp while spreading the ends evenly between beam flanges.

THE TRAVERSING MECHANISM. The rotating loom beam causes the press roll to rotate, which in turn causes the four rollers to rotate. One pair of rollers is mounted on a shaft on which a worm is cut; this worm is in contact with a worm gear, causing the press roll to traverse from beam head to beam head.



Efficiency at Slasher. Slashers are doffed less frequently, with subsequent savings; looms run longer. Greatest saving is in weave room, according to one mill superintendent.

Warp Quality Improved. In this mill, management felt that quality of warp was improved by the traversing press roll, although no accurate records were available to indicate a reduction in loom stops.

One large North Carolina mill uses the traversing press roll on 105″ beams on a hot air slasher with good results. The warps are more uniform and are wound evenly across the beams, according to a mill official.

Operation. The traversing press roll mechanism, built by West Point Foundry & Machine Co., is designed for a 2¼″ traverse of the ball bearing rollers which carry the press roll. The press roll itself is normally made one inch shorter

than the distance between the heads of the loom beam, which allows a brief dwell of the press roll at each end of the traverse to pack the yarn next to the beam heads.

The pressure of the press roll against the beam head is very light in order to avoid cutting the yarn. The ends of the press roll are fitted with Micarta plugs to prevent excessive wear of the beam heads and to eliminate the formation of sharp metallic edges that might cut the yarn.

The traversing press roll is a compromise between the expansion-type press roll, which presses against both beam heads simultaneously, and the plain roll, which contacts only one beam head due to variation in loom beams.

More on European Shuttleless Looms

Editor's Note: Considerable reader interest in European shuttleless loom developments was evidenced as a result of the publication of short news items (TI for May, 1955, page 77 and TI for July, 1955, page 57). Several asked for more information about the looms but no other details were available.

During the recent Second International Textile Exposition in Brussels the Czechoslovakian textile machinery firm Kovo had on display two shuttleless looms which are reported to have attracted considerable attention — on one the filling was carried through the shed of the warp by an air jet; on the other, a water jet was utilized. Here are some other details of construction which were gleaned from overseas textile manufacturing publications reporting on new developments at the show.

BOTH LOOMS were noiseless. The pneumatically operated machine was a narrow loom weaving fabric about 15 inches wide. Speed of this machine was 600-800 rpm. It was designed for the production of open weave fabrics, such as gauze for bandages.

The water-jet loom was a wider machine (weaving a fabric about 40 inches wide) suitable for hydrophobic filament yarns. It operated at speeds up to 400 rpm.

Operation was described briefly as follows: Filling is supplied from a large bobbin, its length being determined by means of a special measuring disc. Constant stretching is achieved by means of a special magnetic brake. The filling passes through a jet apparatus and by means of an air jet (on the pneumatic loom) or a water jet (on the hydraulic loom) the filling is laid into the open shed. The filling is then cut off and tied at the ends by a gauze shaft.

Take Out This Free Insurance Policy

WHAT'S with these jokers who always have to pay through the nose for something or they think they're being had?

A guy will pay a lot of money for protection he may or may not need on the one hand, but will turn down *free protection* he may or may not need on the other. For example, Sam has spent about $150 a year now for 10 years for auto insurance to save his neck in case he clobbers someone. He hasn't had an auto-accident in all this time and he may never have one. But, do you think he'd go out driving in his car if his auto insurance had lapsed?

Joe has spent about $200 a year for the past 25 years for life insurance — and he ain't dead yet. But, do you think he'd consider missing a premium or letting his policy lapse? Whattsa matter? You stupid, er something?

In the past 10 years Sam has been laid up four times for periods ranging from three days to three weeks because he wouldn't take simple precautions at work — some of that *free insurance* I mentioned.

He busted a toe once when something fell on his foot — and this laid him up a couple of weeks. But he won't avail himself of some of that *free insurance* by wearing safety shoes. He doesn't seem to appreciate anything if it's free.

He got a glob of something in his eye another time and had to make like a one-eyed coot for a few days. But, he's not interested in such *free insurance* as wearing eye protection. That's the simple way.

Joe's just as bad. He darn near lost a finger once because he didn't get first aid for a sliver — and got a bad infection. Almost got his arm yanked off another time on a lathe, when he didn't go for that *free insurance* of stopping it before clearing some chips.

Yes, neither one of these clowns has really been mangled in all his years — and maybe they never will be.

But, why be so inconsistent? You're insuring the same merchandise, whether for free or for fee.— Robert D. Gidel in the *National Safety News.*

Weaving Defects (Part 6*)

BY CLYDE O. CRONIC
EXCLUSIVE

Harness Skips

(Similar or opposite reasons can cause dropped warp threads.)

1. Harness too low on one end, as a result of wear or improper adjustment on harness straps, rib hooks, jack hooks, or strap.

2. Harness sheave worn (sometimes with oblong hole in it), or sticking.

3. Heddle rod unfastened at top; rib hooks broken or unfastened.

4. Mat-up between harness and reed.

5. Harness too high.

6. Weak harness springs (harness will not return to position quickly).

7. Warp too tight or too slack (any number of loose or worn parts can change the tension on the warp).

8. Take-up roll, stop motion girt, or whip roll too high or low.

9. Heddle eyes not divided, or one broken.

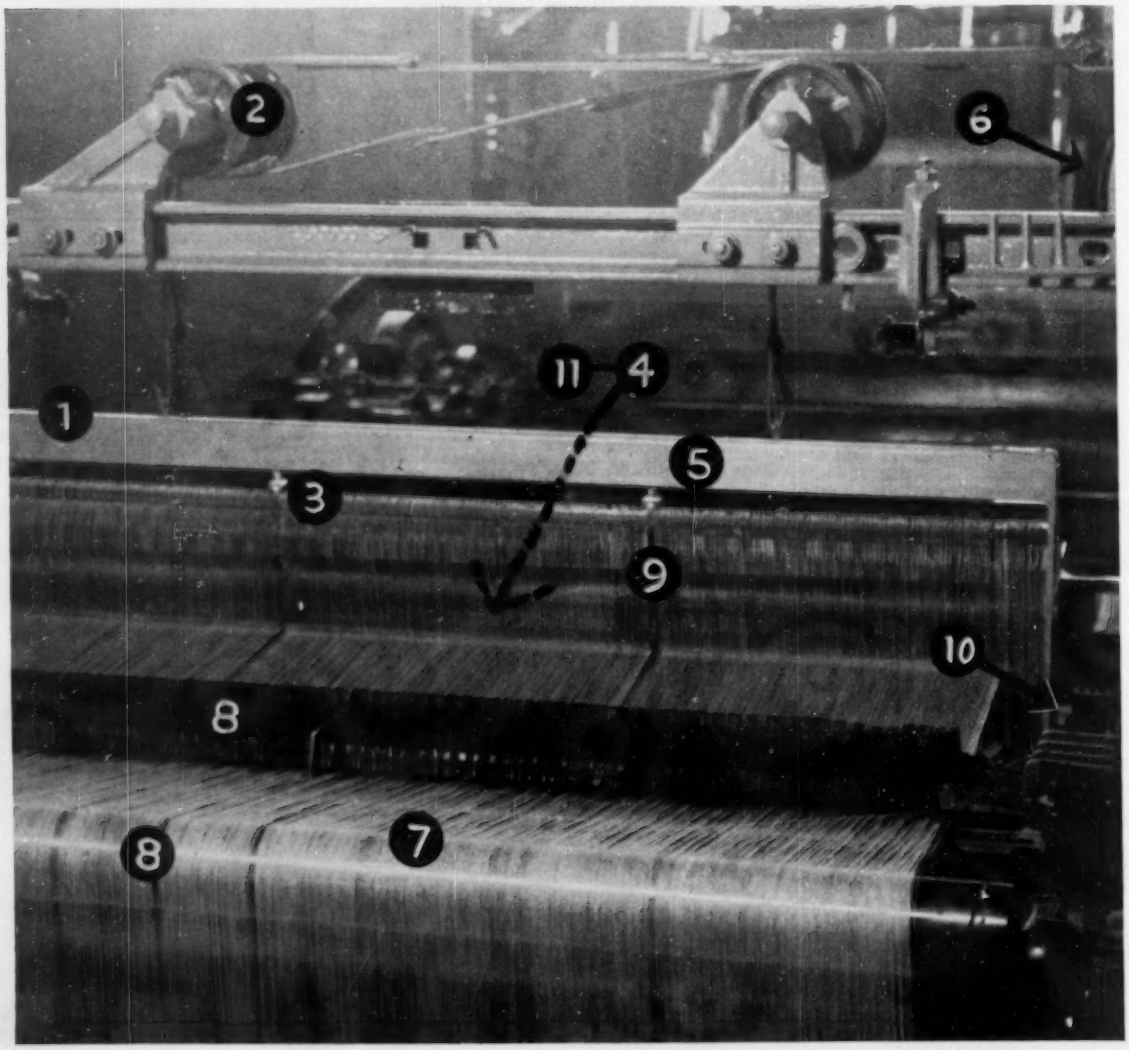
10. Harness hanging on crank arm.

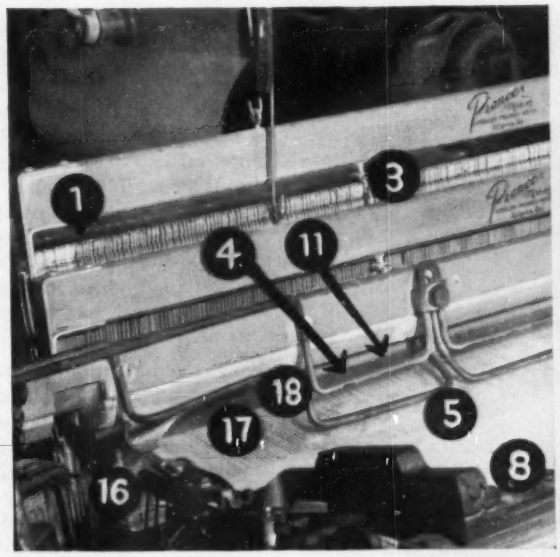
11. Lint balls between harness and reed.

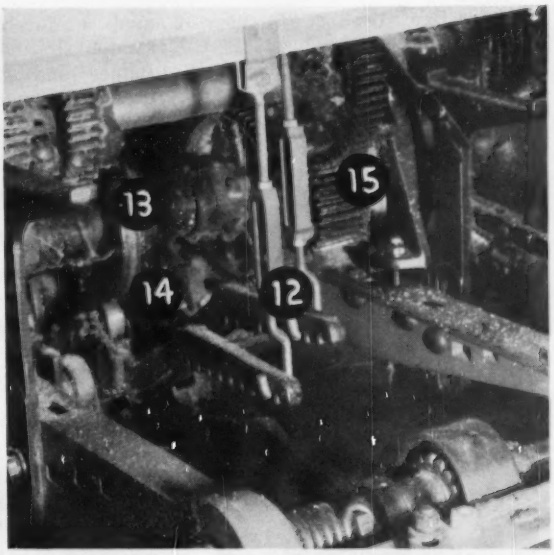
12. Jack stirrups not properly set; not divided in jack sticks; jack hooks not same length.

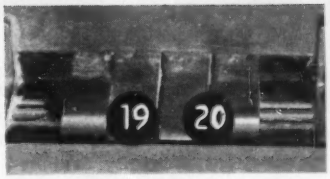
13. Improper timing of cams, especially when running two sets.

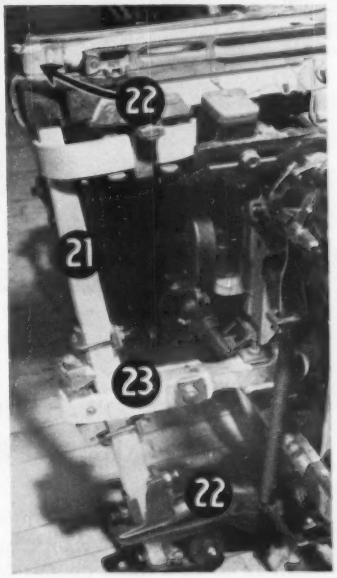
*Previous parts appeared in May, June, July, August, and September issues.











Harnesses timed too early or too late. Loose cam.

14. Worn treadle rollers and studs — keep properly oiled. Also, the treadle rollers should follow the harness cam around its full surface.

15. Gears not meshed deeply enough (harness change gear, idler gear, auxiliary shaft gear); idler gear stud worn.

16. Loom out of line.

17. Warp threads crossed in reed.

18. Reed dents bent or too close together.

19. Treadle shaft worn or stuck, causing treadle roller not to follow the cam.

20. Treadle shaft slipped to one end of treadle bracket; bracket loose.

21. Picking too early or too late; too much stroke on stick.

22. Picker not parallel (throwing shuttle in crooked path).

23. Too much power on loom.

The following causes of harness skips are not shown in the photographs:

24. Tape selvage motion not set or out of time.

25. Straps on Lacey head not properly divided.

26. Middle girt loose.

Combination Process Improves Flame Resistance of Cotton Cloth

AN IMPROVED flame-resistant treatment for cotton fabric, said to be much superior to previous treatments, has been announced by U. S. Department of Agriculture scientists at the Southern Regional Research Laboratory, New Orleans, La.

The new treatment, based on a skillful combination of mutually supporting fire-retardant agents, results in cloth that passes the most stringent laboratory tests for flame resistance, they reported.

Two methods of imparting flame resistance to cotton cloth have been announced previously by USDA's Southern Utilization Research Branch. One of these processes, called the "THPC" process (TI for Dec., 1953, p. 143), utilized a unique chemical, tetrakis (hydroxymethyl) phosphonium chloride, which reacts with certain other materials to form an insoluble polymer within the fiber. The second process, lately announced

(TI for Dec., 1954, p. 75), uses a bromoformallyl-phosphate (BAP) material. Applied in emulsion form to cotton fabrics, it coats each fiber with an insoluble polymer.

Both of these earlier processes give a durable finish. Fabrics treated by either method are flame- and glow-resistant, and useful for many purposes. They each pass the usual test of not propagating flame when the center of a swatch of the treated cloth is exposed to an open flame.

However, when both of these treatments are properly applied to the same cloth, the combination is much more effective than when either is used alone, the announcement indicated. The resulting product will pass the much more stringent "strip-burning test," in which a thin strip of fabric, instead of the wider swatch, is exposed to an open flame.

In the new combination treatment, one part of BAP emulsion is mixed with two parts of the THPC-resin solution and applied in a one-bath treatment. The cloth is impregnated with the mixture, then dried and heat-cured. This process increases the weight of the cloth about 18 per cent, but normal fabric properties are otherwise little changed. The flame-resistant finish is said to be highly durable to both laundering and dry cleaning.

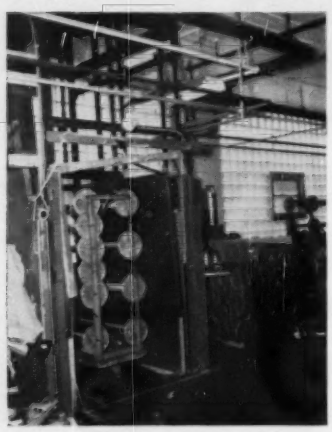
Typical Application of THPC-BAP Combination Flame-Retardant to Cotton Fabric. The treating bath for the cotton fabric is prepared in the following manner: 286 parts tetrakis (hydroxymethyl) phosphonium chloride is dissolved in 375 parts water, and 54 parts triethanolamine is added. 175 parts urea is dissolved in 375 parts water and 173 parts trimethylol melamine dissolved in this solution. These two solutions are combined and mixed with 810 parts of a 33% BAP emulsion which contains 12 parts of plasticizer, tetrabutyl thiodisuccinate. The preparation of this emulsion is described in the *Textile Research Journal*, 25, 100 (1955). This treating bath is stable about 8 hours.

Cotton fabrics are impregnated with the bath on pad rolls using two dips and two nips. About 70% wet add-on is used on fabrics weighing 8 oz per yd. The fabric is dried 5 minutes at 212 F, and cured for 5 minutes at 284 F, in a vented hot-air oven. The fabric is then jig washed and treated with a softening solution before use.

A weight add-on of 18-20% is satisfactory on cotton fabrics 8 oz per yd or heavier. Lighter fabrics may require a larger add-on.

Materials Handling

Woolen Mill Has Special Elevator for Roping



MANAGERS of many woolen mills located in multiple-floor buildings have been thinking about improved methods for moving roping spools between card and spinning rooms. Plans usually include either an internal or external elevator or conveyor.

One system, devised by Strong, Hewat & Co., Inc., of North Adams, Mass., utilizes an elevator (pictured here) specially designed to accommodate the mill's standard roping spool truck. It connects the floor shown (card room) with the floor above (spinning room).

Report on Study of Wool Grease Recovery and Use

AN INCREASE in the annual level of production of wool grease from 10 to 12 million pounds to a minimum of 20 million pounds would substantially benefit all segments of the industry, according to a marketing research report issued by the U.S.D.A.

A potential market for wool grease is believed to be available to absorb the added production, over a period of time, without bringing about unreasonably low prices for the product. At the same time, improvements in waste disposal, which could be obtained more efficiently with increased production, would contribute to the abatement of stream pollution resulting from wool scouring operations.

This report is an outgrowth of a recommendation by the Wool Advisory Committee that one phase of the Department's wool research program be devoted to an economic appraisal of the scouring, recovery refining, and distribution of wool grease and other byproducts of the wool manufacturing industry.

In this study, the average per unit cost of scouring grease wool and recovering wool grease was developed for the industry for the first time.

A single free copy of the report of this study—"Wool Grease: The Economics of Recovery and Utilization in the United States," Marketing Research Report No. 89—may be obtained from the Marketing Information Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

Quick Calculations for Ventilating Singeing Machines

BY WILLIAM O'KEEFE
Engineer
United Piece Dye Works

EXCLUSIVE

Design of ventilation systems for singeing equipment and other mill machines is usually a problem for each mill to solve according to individual requirements. Many mill engineers do their own computations for duct-work. This article may serve as a guide for calculating the requirements quickly and with reasonable accuracy.

GAS INCANDESCENT firebrick singeing machines are being used in considerable numbers in cotton and rayon finishing plants. Much hot plate and open gas flame equipment, once in common vogue, has been discarded so recently that most mill men still have a working familiarity with it.

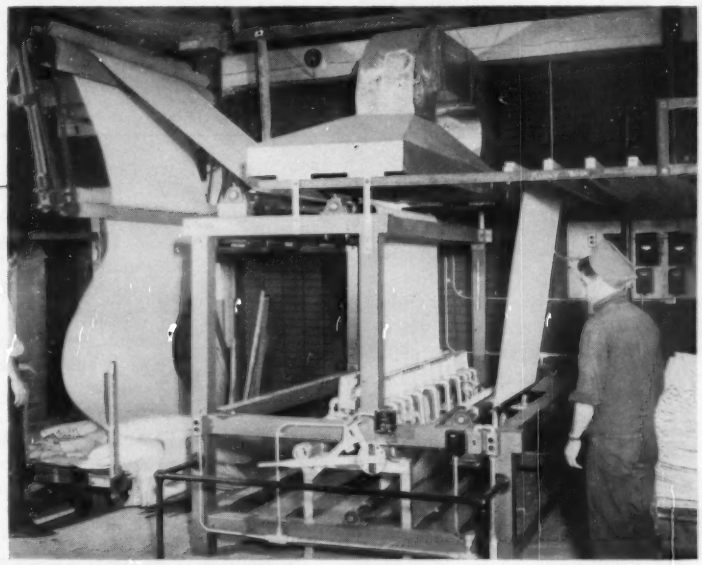
What a few mill men might not be familiar with is the fact that fans and hoods which serviced old types of singeing apparatus are often inadequate for late model burners; they usually do not have the air-moving capacity required to exhaust all the heat and odor generated in singeing. The large amount of gas consumed by new, more efficient burner sets produces a greater volume of hot combustion materials. A ventilating system begins to proclaim its inability to meet higher service requirements when grey room air becomes foul, operators are discomforted, and fans or motors burn out with monotonous regularity.

The installation of a new singeing machine will more than likely call for replacing existing duct-work with a high peformance vent system. This means one which:

(1) Collects all the products of combustion in the exhaust hood.

(2) Dilutes the products of combustion with sufficient room temperature air to cool flue gases to a level which can be handled by common air moving equipment.

A few simple rules will enable the mill operator to design and fabricate a system which will meet the aforementioned objectives.



SINGE MACHINE, showing exhaust, duct work, and swing. Note how cloth may act as a baffle as it passes through burners and is guided to the plaiter. In this installation the entrance to the hood is centered above the horizontal zone of cloth travel and slightly forward of the burner in order to collect heat convected by the cloth.

Determining Hood Dimensions

Height Of Hood Above Burner. Allowing two feet between bottom of the hood and the burner will permit accessibility to the burner apparatus without encumbering partitions or doors.

Hood Width At Entrance. The hood should be wide enough to overlap the heat source by about 40 per cent of the hood's height above it.

The dimensions may be expressed as follows:

Hood Width $= 2\ (0.4 \times D) + W_b$

where: D = Height of hood above burner and,

W_b = Width of burner (fill-ingways).

For example, if the hood is mounted 24 inches above a 72-inch wide burner, its width would be 92 inches.

Hood Length At Entrance. In practice, the following equation has proved satisfactory for establishing the length of hood:

Hood Length $= 2D + L_b$

where D = Height of hood above burner and,

L_b = Length of burner (warp-ways).

Determining Fan Capacity

Two empirical formulas are presented (derivation shown in boxes on next page):

(1) Multiply the hood entry area in square feet by 285 to obtain fan capacity in cubic feet per minute.

(2) Multiply the higher heating value of the gas used in Btu per cubic foot by the gas consumption in cubic feet per minute and by the factor 0.36 to obtain fan capacity in cubic feet per minute.

Note: The highest fan capacity resulting from (1) or (2) should be the deciding value. If the volume obtained from (2) is much greater than that obtained from (1), the hood should be enlarged

accordingly. The two formulas are valid for nearly every common gas including: coal gas, natural gas, blue water gas, carbureted water gas, propane, and butane.

A basic assumption in the calculations leading to these two formulas is that the temperature of flue gases is fixed at 300 F, a heat level permitting use of various readily available fans of centrifugal or propeller type. If the mixture of flue gases were to be reduced to a temperature substantially below 300 F, more room temperature air would have to be drawn into the hood for greater cooling effect, thereby increasing mixture volume and demanding a fan of larger capacity. On the other hand, a smaller capacity fan would cause a significant reduction in mixture volume which results in raising the temperature of flue gases to a level where a special high temperature range fan would be needed.

Also to be considered is the extra horsepower required to run the exhaust fan when the singe machine is not operating. Cool air will demand greater fan power. As will be seen, both formulas leave a factor of safety which provides for such a contingency.

Suggestions. Select a fan that is easy to clean. Singeing produces substances which coat ductwork and fan blades. Radial blade centrifugal fans and extended shaft propeller fans operate with low noise and are easily maintained.

Locate exhaust outlet so that discharged gases will not return to the air intake of the combustion system.

A hood tapered from the entry to the duct reduces pressure loss slightly at low cost. Ceiling clearance will determine depth of the hood and the taper as well as size of the transition fitting.

Dust is a problem with some wool blends, silk noil, and mohair constructions. A dust collector should be integrated with the singe machine when troublesome fabrics are regularly processed. Wetting out or brushing is adequate for spun rayon and cotton.

A Sample Calculation. Using coal gas, a finisher finds that 75 cubic feet per minute of coal gas are consumed in singeing a cloth weighing 0.60 pounds per yard at a speed of 150 yards per minute. The information in the box above shows how he would go about designing a suitable ventilation system.

In the singe machine used as the example, ductwork might consist of a round duct 24 inches diameter, 12 feet long, with one elbow. At an average velocity of 4450 feet per minute in the duct, the losses would be about 0.17 inches water at the entrance, 0.9 inches water in the duct, and 0.25 inches water in the elbow, a total static pressure of 0.51 inches water assuming no building draft in the singe room. The designer could select a suitable centrifugal fan of 3 hp for 14,000 cfm at 0.51 inches water.

Sample Calculation

Gas Used	Coal Gas
Gas Consumption	75 cubic feet per minute
Higher Heating Value of Gas	532 Btu per cubic foot
Size of Burner Installed	6 × 2 feet
Height of Hood above Burner	2 feet
Hood Width 2(0.4 × 2) + 6	7.6 feet
Hood Length 2×2 + 2	6 feet
Area of Hood Entrance 7.6 × 6	45.6 square feet
Fan Capacity:	
Rule (1) 285 × 45.6	13,016 cubic feet per minute
(2) 532 × 75 × 0.36	14,364 cubic feet per minute

Derivation of the Constant 285 (Formula 1)

(1) Air must be pulled into the hood at a speed of 200 feet per minute to prevent flue gas escaping into the singe room.

(2) A typical hood for a 72-inch burner might measure 8 × 4 feet or 32 square feet.

(3) 200 feet per minute × 32 square feet equals 6400 cubic feet per minute of air drawn into the hood.

(4) The ambient temperature of air drawn into the hood is normally 100 F. This air, mixed with combustion products at 6400 cubic feet per minute results in final flue temperature of 300 F.

(5) At 300 F, the total volume of mixture will be $\frac{459 + 300}{459 + 100} \times 6400$ or 8684 cubic feet per minute. Adding 5% to the volume for combustion products, actual volume will be 9118 cubic feet per minute.

(6) 9118 cubic feet divided by 32 square feet is 285 feet per minute air velocity.

Derivation of Formula 2

Fuel gas burns with air yielding CO_2, H_2O, and N_2 which contain all the energy in the gas. CO_2 and H_2O dissociate slightly at higher temperatures, but the heat used up in dissociation will be ignored for the purposes of this derivation because its effect is small (16% at maximum).

The higher heating value of gas (Btu per cubic foot) is determined at 60 F, 30-inches mercury. If gas enters the burner at 100 F and exhaust gases are 300 F, corrections to heating values must be made.

For example:

COAL GAS: 60 F, 30 hg { higher heating value—532 Btu per cubic foot; lower heating value —477 Btu per cubic foot

Components	Composition (%)	Correction for difference of temperature 100 F—60 F (Btu per cubic foot)
H_2	54.5	.398
CO	10.9	.081
CH_4	24.2	.222
N_2	4.4	.033
CO_2	3.0	.029
Others	3.0	xxx
TOTAL	100.0	.763

The difference is specific heat from 100 F to 60 F is a negligible .763 Btu per cubic foot. However, the correction from 300 F to 60 F is not negligible.

If the products of perfect combustion are:

Components	volume flue gases per cubic foot gas burned (cubic feet)	Correction for difference of temperature 300 F—60 F (Btu per cubic foot)
CO_2	.49	2.18
H_2O	1.15	5.98
N_2	3.62	16.09
TOTAL	5.26	24.25

The total correction, 24.25 Btu per cubic foot, is subtracted from the lower heating value, 477 Btu per cubic foot (because water in combustion products will not be cooled to liquid form), leaving 453 Btu available from each cubic foot of gas to heat diluting air from 100 F to 300 F.

Specific heat of air in this temperature range is about 0.25, requiring 9.07 pounds of air per cubic foot of gas. At 300 F, 14.7 psi, 9.07 pounds of air occupy 178.4 cubic feet. To this latter figure must be added the gas combustion products of 7.70 cubic feet $\left(\frac{459 + 300}{459 + 100} \times 5.26\right)$, resulting in a total of 186 cubic feet of mixture per cubic foot of gas at the pressure and temperature it passes the fan.

The ratio of mixture volume to higher heating value (532/186) is 0.35 for this specific coal gas. A better value for general use is 0.36, satisfactory for most of the common gases.

Heat carried out by cloth has been ignored in these computations. Suppose a singe machine uses about 40,000 Btu per minute. If the gases heat the cloth 100 F, the cloth takes out about 2900 Btu per minute (singeing at 150 ypm). This could be an appreciable factor, but some of those Btus go towards heating air entering the hood and another portion is offset by heat generated from burning fibers on the cloth. Until more detailed information is available on the extent of these heat losses, Rule (2) will serve a broad range of applications.

Reflective Garments to Save Pedestrians' Lives

FASHIONABLE garments that "light up" under auto headlights at night — to make pedestrians easier to see — were introduced recently.

According to reports, the garments look the same as any other garment day or night, except when seen from behind car headlights at night. Then they appear to "glow" a bright silver, visible hundreds of feet away (see accompanying illustration).

Source of the silver reflection is "Flecton" reflective yarn developed by Minnesota Mining and Manufacturing Co. (see new product announcement on page 197 of this issue). Gray in color, the yarn is an outgrowth of the research into reflectivity that led originally to "Scotchlite" reflective sheeting now used for traffic signs, various types of hazard markers, etc.

Reflective garments made from woven and knitted fabrics produced by William Skinner & Sons of New York and Munsingwear, Inc., of Minneapolis, respectively, were shown publicly recently at a special outdoor demonstration for more than 100 press and safety representatives, who viewed the garments from moving cars to note how far away the reflective clothing could be seen. Garments were shown in pairs, one reflective garment with one identical-looking non-reflective garment. Viewers said they saw the reflective items three to six times farther away than their non-reflective counterparts.

A REFLECTIVE RAINCOAT like the one this woman is wearing can be seen more than 800 feet away at night with city driving lights, and over 1,500 feet away with high-beam highway lights (right photo). Note in the left photo that this same garment looks like an ordinary raincoat made from conventional fabric.

Nighttime motorists this fall will see women in reflective rainwear and men, women, and children in reflective sportswear — and in the next few years can expect to see women in reflective dresses, blouses, and capes; men in reflective suits, hats, and coats; and children in reflective outerwear of all kinds, the 3 M company predicted.

Control Chart Applications In Textiles

BY NORBERT L. ENRICK*
Institute of Textile Technology

FROM A SURVEY of more than fifty mills in New England, southern U. S., and Canada, this writer has found charts in successful use in carded cotton spinning applied to the following characteristics:

1. Raw Materials Testing. Tests performed for this requirement, supplemented by control charts, are: Fiber length in inches, length uniformity in coefficient of variation, fineness in micrograms per inch, fiber maturity in per cent.

2. Stock Weight and Variation. Charts are generally maintained at each processing stage. These are, in sequence of processing: Opening, picking, carding, drawing, roving, and spinning. One processing department, usually either the drawing frames or the roving frames, is often used as the key control point for making gear changes to keep weights in line.

3. Linear Uniformity of Stock. With the development of electronic testing instruments, we can now obtain automatic charts that

*From a paper presented during the ninth annual convention of American Society for Quality Control.

describe the inch-to-inch variations in the textile strand and in addition show on a dial the average per cent range (related to standard deviation). Thus we have a sort of automatic control chart.

4. Running Conditions of Stock. Running conditions of stock are evaluated in terms of the rate of "ends-down." Ends-down tests are usually performed on the drawing, roving, and spinning frames, and expressed in terms of occurrences per thousand spindle hours of regular production. Therefore the defects-per-unit type of chart is used.

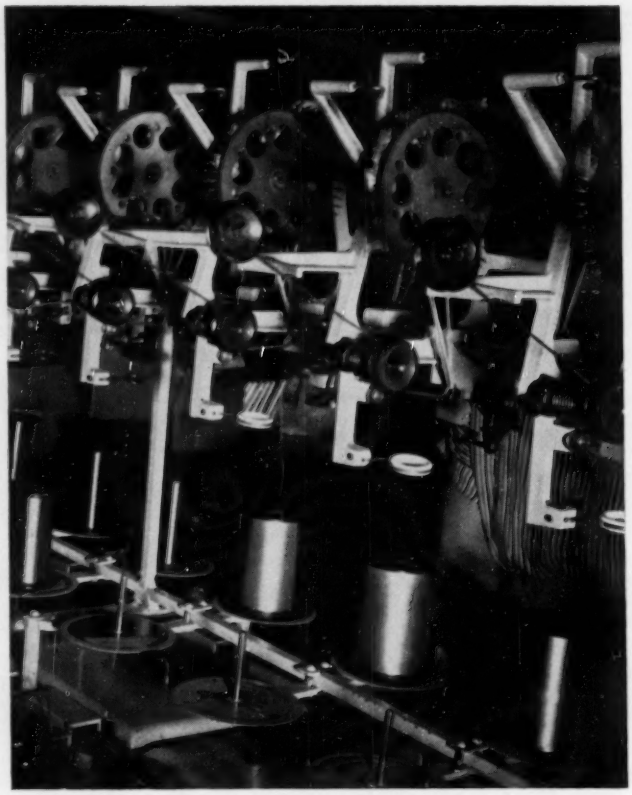
5. Reworkable and Non-reworkable Waste. Waste in a cotton mill is of either of these two major classifications, and then broken down further by department and category within that department. Control charts here aid from the standpoint of quality (proper removal of short fibers, trash, etc.) and cost (keeping avoidable waste to a minimum). Both operator carefulness and proper machine setting may thus be controlled by charting.

6. Processing Tests. A large variety of tests may be included under this heading. The first of these applies to the degree of opening and to feeding percentage Other tests suited for control chart use are applicable to neps in the card web; to package size of sliver, roving, and yarn; to roll settings; to spoon and trumpet knock-off checks; to roving traverse; to critical speed ratios, such as spindle to front roll for proper twist insertion; and to many others.

7. End-Product Evaluation. The characteristics for which mills have kept control charts are these: Single-end strength in grams; skein-strength in pounds; linear uniformity; defects - per - fifty - yards; appearance grade; twist in turns per inch; twist variation in coefficient of variation; moisture content in per cent.

Proper control of raw materials and processing conditions during production is the best assurance that the final yarn will meet the end-product specifications.

Carrying Device Stops Fuzz



QUILLERS at Blue Bird Silk Mfg. Co., Inc., York, Pa., have been fitted with these mill designed tensioning devices. The unit applies tension to yarn without undue surface friction which, in silk yarns, tends to cause accumulation of considerable "lint." In this device the yarn coming up from the bobbin is carried around tension wheel, held in place by two rows of curved pins, and carried down to the quill.

—*Staff*

160 Textile Plants Have Precast Concrete Roof Deck, Survey Shows

NON-COMBUSTIBLE precast concrete roof deck is being specified more and more for new plants in the textile industry, a recently completed survey reveals.

Approximately 8,300,000 square feet of this roof deck were installed on new textile plants over the mid-century decade ending last December.

The survey, covering major structures in all fields, showed that the average size of precast concrete roof deck installations in the textile industry was the second largest among all categories

With 160 installations, the average was better than 50,000 square feet.

Among the prominent reasons cited by architects, engineers, and the 122 textile industry owners for specifying precast concrete roof deck were reduced maintenance, speed of installation, resistance to moisture and chemicals, durability, reduced insurance cost, and fire resistance.

Woolen Blankets Can Be Dyed Two Shades in One Bath

STAFF REPORT
EXCLUSIVE

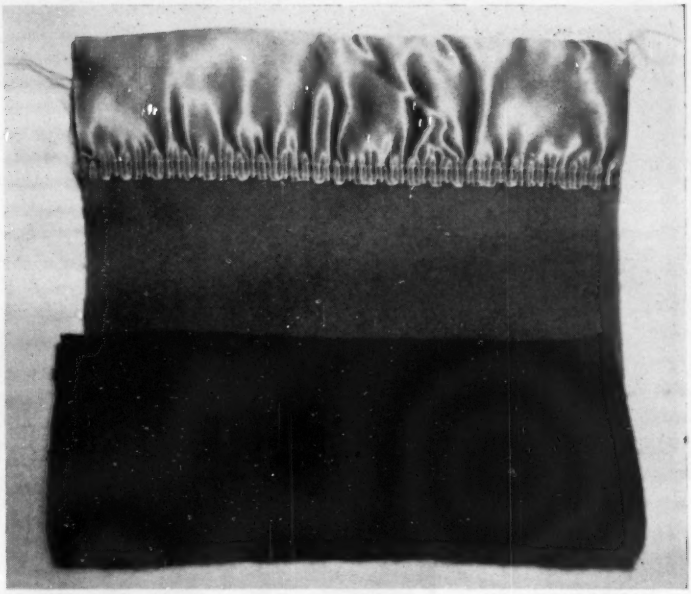
AS A RESULT of three years of lab studies and production trials, Kenwood Mills Limited, Arnprior, Ontario, is now in full production dyeing of standard woolen blanket constructions; the nature of the process permits entry of the clean all-wool product in a dyebath to emerge dyed a different color on each side of the blanket. This method does not utilize chlorination or resist-treating.

The Problems. Normally, blankets are filling-back constructions woven on a light wool warp. Stock-dyed fillings of two colors are fed into the blanket so that one color always weaves on the face, and the other color on the back. The large stocks of colored woolen filling required make this type of operation difficult and expensive. For example, to produce an 11-color line of blankets, 23 different colored yarns must be prepared.

Further, in the standard 18-pick construction, possibilities for the showing of a contrasting color through the blanket face are pronounced in stock-dyed weaving, due to the nature of subsequent wet processing.

In considering cross dyeing, the inclusion of a fiber other than wool to achieve a two-toned piece dyeing effect violates the market requirements for an all-wool product. Resist treating one wool filling by some method of chlorination tends to produce a harsher article — another prohibitive approach.

It was in view of this background that Kenwood sought to develop a woven base material which would lend itself to the dyeing of several shades.



TWO-TONED EFFECT is clearly seen in this photo of one combination folded to show both sides.

The Development. Studies in the lab laid the groundwork for an extensive series of dyeings which established formulations for the two-toned dyeings.

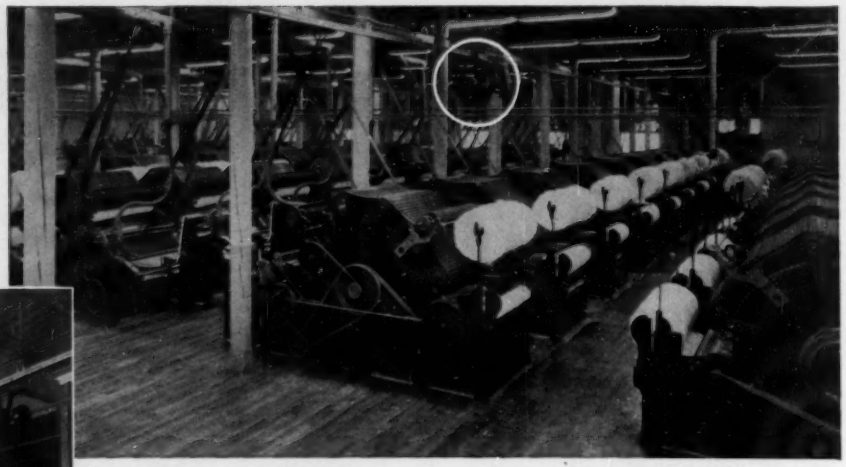
One established the critical pH of a range of dyestuffs and permitted grouping them by these critical pH values. The other was selection of the appropriate buffering agents. The latter was established as optimum through use of ammonium dihydrogen phosphate or ammonium acetate to take care of residual alkalinity in the goods, and to adjust the dyebath to a constant throughout dyeing. Many buffers were charted for concentration vs pH, and an approximate 3 per cent application was established for the compounds selected.

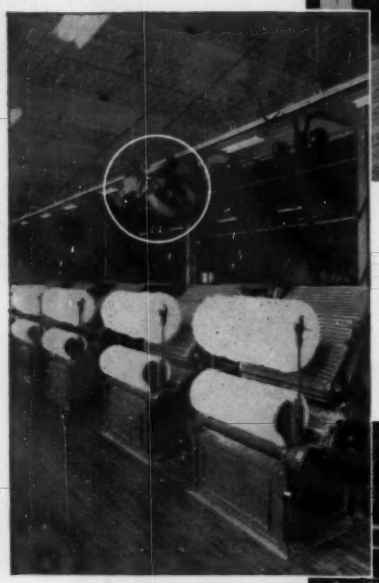
Dye becks were fitted with pH meters, and hundreds of trials were made. At first, color contrasts were not sharp enough between one side of the blanket and the other, but trial and elimination yielded the proper results.

Napping and drying are the only processes which follow dyeing.

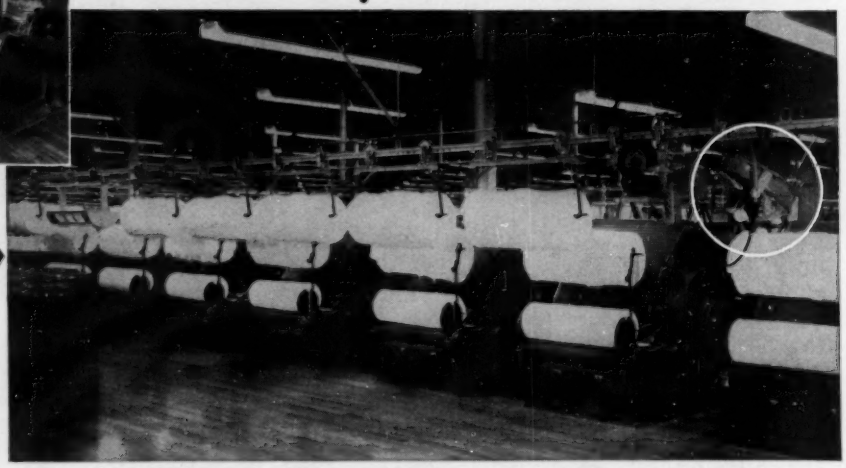
The Results. Examination of color combinations dyed by the Kenwood method shows that each two-toned effect has one color in common. The colors are either two tones of the some color, or contain an analogy in color. To illustrate the latter instance, one combination is light green on one side, and sand on the other. Yellow is common to both sides.

The current color range in production at Kenwood in blankets dyed by this method includes eight combinations. Light fastness is excellent.





Low Cost Card Room *Ceiling Cleaning*



Cleans ceiling while transporting train of laps throughout card room.

It pays to clean *automatically!* American MonoRail Overhead Cleaning is most effective because it increases production and lowers cleaning costs and does a better job. Reports from mills using automatic overhead cleaners show they are definitely in favor of such a method. One mill reports elimination of blowing down every shift. Another, less slugs and elimination of former cost of manual overhead cleaning. All agree it pays to clean automatically with American MonoRail Overhead Cleaning.

AMERICAN OVERHEAD HANDLING EQUIPMENT

MONORAIL COMPANY

13106 ATHENS AVENUE • CLEVELAND 7, OHIO

[IN CANADA—CANADIAN MONORAIL CO., LTD., GALT, ONT.]

Large Doffers on Woolen Cards: How to Evaluate and Use Them

BY CHARLES F. MILLWARD
EXCLUSIVE

THE LARGE breaker card doffer is of Belgian origin, and for many years was not popular in America. Since 1947, major American card builders have been introducing large doffers for woolen carding systems, and in recent years many boss carders and textile technicians have wondered about the place of these large rolls.*

Why Use Them? In equipping most card models with a large doffer, it is necessary to mount the fancy farther back and eliminate some of the workers. This proves beneficial to production on stocks which do not require a maximum amount of blending. The large circumference of the doffer makes up for the carding energy lost by the elimination of workers.

Besides being fewer, workers are usually larger, making for less grinding of workers and strippers, fewer setting changes, and generally less attention to workers and strippers.

Blending. Since the average woolen mill blends stocks of varied nature to arrive at a yarn of competitive price, the effect of several different fibers in the card at the same time must be considered when examining large doffers.

In some cases blends do not require all of the carding energy that is available from the average woolen card which is in good mechanical condition and equipped with good clothing; it is often believed that stock in this country is over-carded. In such cases large doffers fulfill an important function. A problem, however, is in blending various stocks that do not mix well with each other.

Most of us know that when a card is in operation it is extremely difficult to view the blending operation; once the machine is stopped, the blending also stops. Hence, if several stocks are of approximately the same staple length and all of one color, it is almost impossible to determine the amount of blending that has taken place until such time as the stocks have been picked apart at the lab.

In order to get a better picture of blending, let us take for instance an oxford blend which is composed of 90 per cent black and 10 per cent white stock. Let us pick these stocks two, three, or more times through the mixing picker and then study the mix at the feed box of the carding machine. There you will notice that the white stock is in patches and balls and stands out distinctly from the black stock it is mixed with. It is a long way from the oxford grey color that is expected to result on the finisher card.

As this blend starts from the feed box and enters the first breaker card, you will notice on each worker as the stock progresses through the card, that the white patches become smaller.

The role of the accompanying stripper rolls is also important in taking the stock from the workers in small bites, depositing it on the cylinder at high speed, and generally contributing to good blending. When carding out is not complete, in the example being given, rovings will contain white patches or nibs: an unsatisfactory yarn will result.

In applying this example which can be evaluated visually to one that cannot, the same dangers can be examined. For instance, in a blend of multiple length batches of the same color, it can be seen that improper blending on the card can concentrate short stock in one section of roving. This causes weak yarn.

These examples suggest, while a large doffer card with fewer workers may provide carding energy equal to that created by a standard doffer size with standard numbers of workers and strippers, that blending is also important. Further, blending is tied up with the number of workers: the more, the better.

A final consideration in studying mill conditions with regard to the degree of blending action required from the card set is the variety of work processed on it. If cards in the same department are called on to run the gamut of jobs from running waste to fine work, cards must be equipped to do the hardest blending job.

Clothing. In clothing large doffer rolls, general mill practice seems to favor use of a 36 or a 32-36 convex wire. This makes for the doffer carrying too much wire with too many points per square inch.

The large doffer must be receptive to the stocks from the cylinder and if points per square inch are too great, they cannot receive cylinder webs properly. To use an extreme, if there is so much wire per square inch that the doffer surface is practically solid, why spend money for clothing? Why not use a plain roll?

This thinking stresses a shift to more open wire on large doffers to obtain maximum carding energy.

Three Check Points for Big Doffer Use

1. **Blending**—How much blending is required of the card? Are intimate color and staple length mixes required? Big doffers are generally best suited to homogeneous mixtures.
2. **Variety**—Will the same card set be required to switch constantly from coarse work to waste to fine work? Such cards should be equipped to handle the toughest blending as well as carding job.
3. **Clothing**—Is your big doffer equipped with a dense clothing? If so, you'll probably get better results with a more open wire; dense wire tends to cut down carding energy.

*See "Increase Production With Large Doffers," TEXTILE INDUSTRIES for August, 1955, pp. 80-83.

How Duplan Combined Inspection, Rolling, and Papering of Finished Cloth

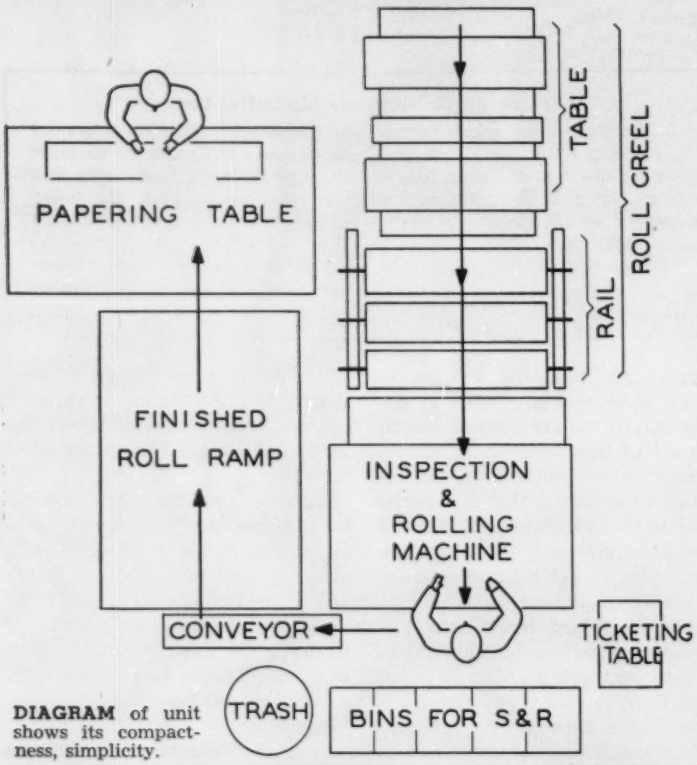


DIAGRAM of unit shows its compactness, simplicity.

STAFF PREPARED
EXCLUSIVE

THIS PICTURE series shows the details of the single unit built by Duplan Dyeing Co., Ltd., Valleyfield, Quebec, to combine inspection and finished rolling into one operation.

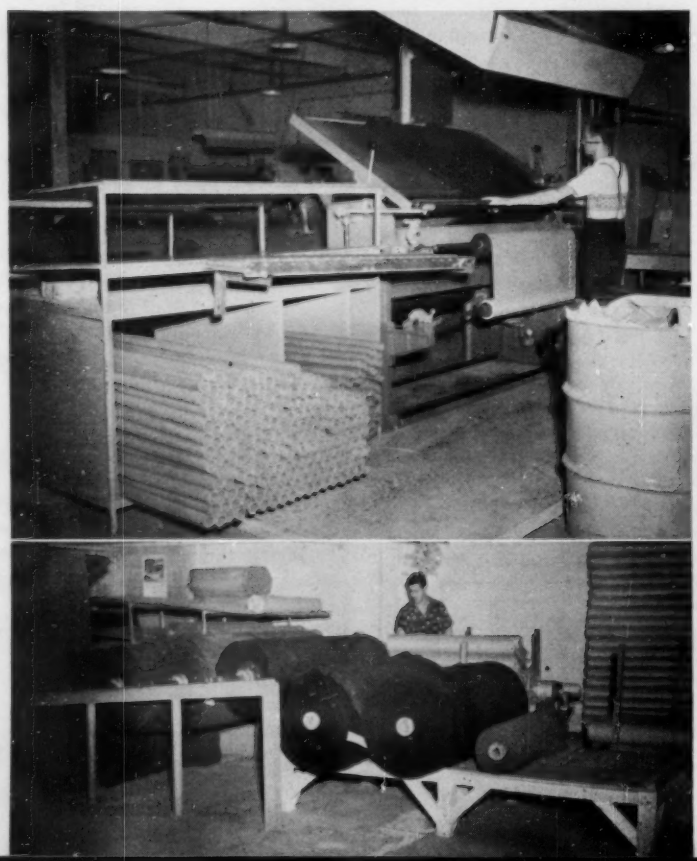
As a commission dyer, Duplan is called upon to tabulate defects in the finished cloth, and to prepare these goods in a tight, good looking roll for shipment to a customer.

In most mills, this includes one inspection run, one finished rolling run (either with or without protective tissue paper between successive layers of cloth), and finally application of a paper shell to the rolls to prevent soilage and damage in shipping cartons and storage.

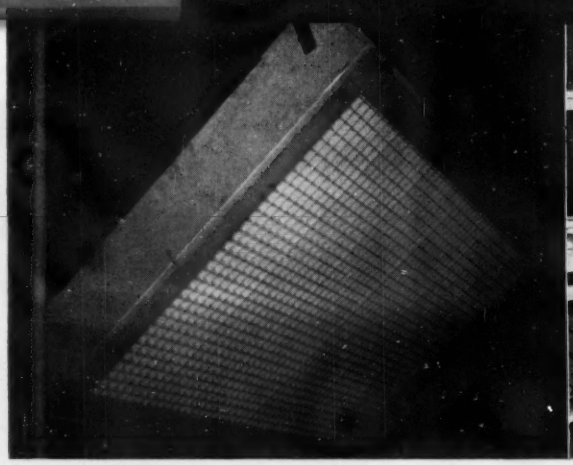
The station illustrated here is operated by two people, performing the same job usually done by three. Because of the compactness and mechanical features of the unit as shown here, Duplan eliminates the floor space, equipment, and personnel required to inspect separately by combining inspection and rolling.*

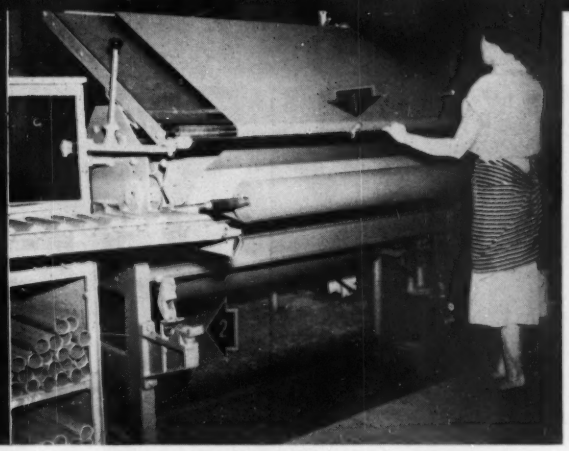
The mill is equipping the entire department with these multiple-operation stations as part of its five-year, half-million-dollar modernization program.

*The rolling machine used in the station described in this picture series is a Van Vlaanderen; the edge guide shown, an Askania; and the selvage marker is a "Mark-Fix."

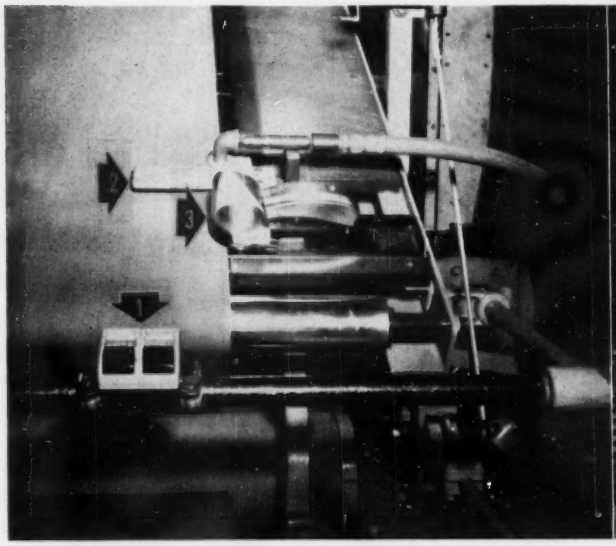


FRONT VIEW of set-up (top photo) shows basic elements: rolling machine with tissue paper attachment running, conveyor, tube rack and cloth ramp, and ticket-table. Not shown are papering station and roll creel (right rear), and waste, shorts, and remnants bins (left rear). Tube is picked by operator from rack located at left of rolling machine and fitted onto wind-up of rolling machine. Note that this rack is combined with the cloth roll ramp leading to papering station, also holds the conveyor. Roll creel (bottom photo) allows female operator to change a shell of dyed goods weighing as much as 500 pounds. Shells are fitted with a bar, lifted onto rail, and rolled into bracket of rolling machine, threaded up through machine.



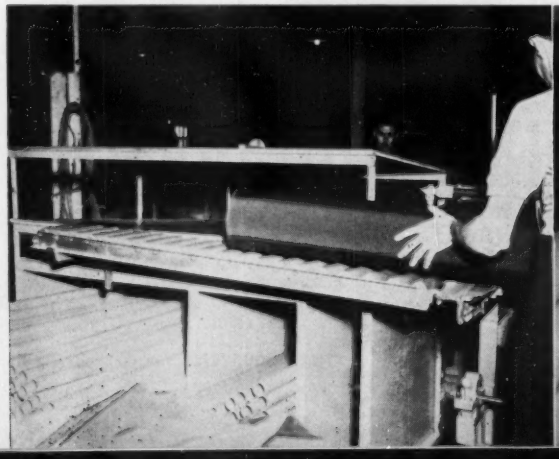


ILLUMINATION over inspecting board (left) was built by mill because one large enough couldn't be secured. The grill box shown here contains 15 fluorescent tubes, each 60 inches long, mounted parallel to the short sides of the box. Rolling machine has been fitted with some mill-devised attachments (right). Arrow (1) points to a handle on the start-stop bar, allowing operator to activate it with her elbow; arrow (2) shows one of the tissue paper roll brackets. Paper is fed continuously between cloth layers on certain types of work.

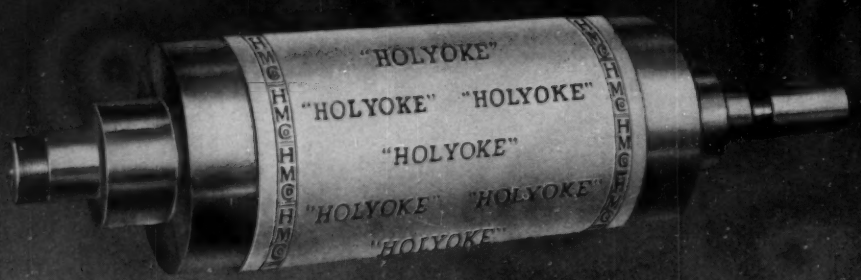


OTHER ATTACHMENTS (left) used to simplify work are: (1) a defect counter on start-stop bar used to tabulate defects cumulatively; (2) an air-jet-activated cloth guider that moves wind-up carriage to position of threaded cloth, and (3) a string selvage marker; this will eventually be attached to edge guider. Ticket-table (right) holds prepared tickets for finished goods which show style number, color, finish, yards, grading. Operator records grade here on master record, also on invoice. At rear of inspection-rolling station are bins for seam-cuts, short cuts, trash.

CONVEYOR connects cloth roll ramp and wind-up carriage. It was installed to facilitate handling of the 90-pound pieces doffed. In the position shown, the piece ticket is attached, and the roll run down the ramp for papering. Papering table (right) is at the end of the ramp. Finished goods at Duplan are papered with one end open so that cloth color is readily seen when in storage. Truck at left foreground holds papered pieces.



"HOLYOKE"
EMBOSSING ROLLS



HOLYOKE MACHINE COMPANY

EMBOSSING ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

Up Against A Card Room Problem?

CARD CLOTHING

For Example

One mill, faced with what its president called a "terrible mess in the card room," reported:

"Your man left us in a position to handle our job successfully and with a personnel that he had trained for us. Our weaving efficiency, now over 90%, is about 10% above what it was. We give him all the credit — what he accomplished would have taken us months to do."

IT'S wise, then, to turn to a TUFFER man. He'll be on the job — RIGHT IN YOUR OWN MILL— and help you work out a solution.

He'll come up with *workable* suggestions and recommendations to kick up production and at the same time improve the quality of your material.

You'll get that valuable ON-THE-SPOT PERSONAL ATTENTION that TUFFER men have been giving to textile mills for years.

Contact us direct at Worcester, Massachusetts, or at our Southern plants at Atlanta, Georgia or Gastonia, North Carolina. Your call will bring immediate action, without obligation.

B-2

Manufacturers of Card Clothing since 1866

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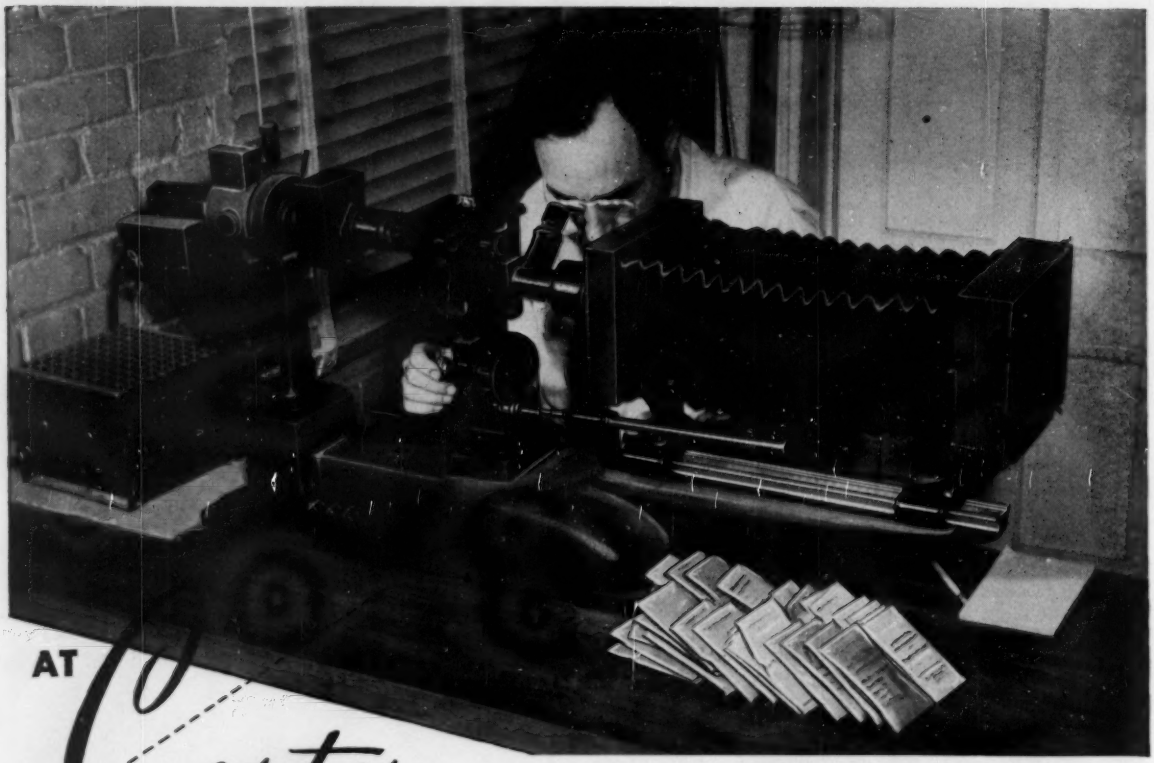

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Should Older Supervisors Be Taught Statistical Quality Control Methods?

In this day of compulsory retirement of male supervisors at 65, the attitude of the older supervisor toward retirement is of paramount importance to the employer.

The writer, who has spent over half a century in the textile industry (the last three years teaching groups of supervisors the practical application of statistical quality control) has acquired an intimate knowledge of supervisors of all ages and all brackets of the operating executive staff.

He finds a tendency for the supervisor of 62 or 63 to coast along as easily as possible during the remaining few years before his retirement. Regardless of the excellent state of his health, and a brilliant record for efficiency in handling his department, the inevitableness of his retirement faces him daily.

It has an adverse psychological effect on him. He tends to become more or less moody, and to acquire the attitude, "What's the use?"

This state of affairs is bad for the company, bad for the supervisor's runner-up, and also bad for the supervisor himself.

The writer will show in the accompanying article how one of the largest yarn and thread companies in the country handled this important matter, and succeeded in retaining the oldsters' high level of efficiency to the very day of their retirement.

BY FRANK VOGEL
Consultant on Statistical Quality Control

EXCLUSIVE

ONE OF the largest and most successful textile plants of its kind, with mills in New England and the South, came face to face with these questions several years ago. The occasion was the inauguration of a course in the simpler phases of statistical quality control methods for its supervisory staff.

At different times in the past the firm had called in industrial engineering firms to make surveys of various kinds. But in this instance it decided to put the introduction of the system in the hands of one of its own managers, a man who had for several years studied SQC and its possible benefits to the company.

The Problem. The concern had a compulsory retirement age of 60 for women supervisors, and 65 for male foremen and supervisors. A survey of the ages of the members of the operating executive staff disclosed that something like six foremen were around 62 years of age, whereas the lower limit of the staff was at 22.

One of the top level executives was assigned to work with the instructor-manager in developing the make-up of the groups to be taught.

A list of the supervisors was made, showing the position, the department, and the age of each. It was decided to have members from each age bracket as well as from each of the different departments in the mill in each group taught. The idea was to have each group representative of a cross section of the operating-executive staff.

The first stumbling block proved to be the admittance of those foremen who had reached the age of 62. With a retirement in sight in three years was it worthwhile to spend the time training them? There were arguments pro and con, but before the issue became too controversial a poll was taken among the superintendents of the several departments involved.

After some discussion it was felt that the men of 62 should be included in the study groups.

Why the Senior Supervisors Were Included. Since it may be of interest to other plants thinking of introducing some aspect of quality control in their organization, some of the factors that gave impetus to the decision to teach the elderly supervisors are given here.

1—Having come up from the ranks, these men had the experience so necessary for the successful operation of their sections or charges.

2—They knew the company's products, the manufacturing processes, the machines, and the operatives.

3—They also knew the types of faulty work made, where and how these were made, and the means for correction.

4—Since the plant's competition was keen, it was felt that the next three years could be considered critical ones for the company, and the best energy of every supervisor was required to weather the crisis.

5—It was thought that inclusion in the groups would give these men a greater incentive to do their best during their last few working years. It would excite their pride.

6—It was considered that omission of these oldsters in the groups would be disheartening to them and would tend to get them to coast along until retirement, and coasting was deemed disastrous for the company as well as the men.

7—The men still had the full responsibility of their respective sections or departments, and to by-pass them with younger men might have a deleterious effect on their efficiency. It would lower their morale.

A few other things were brought up during the discussion regarding their admission to the study groups, all in favor of this step.

Thus the decision was made to include these men nearing retiring age. The instructor, a man who had himself come up from the ranks over a long period of years, was heartily in accord with this move.

The top level management of the mill went along with the opinion of the department superintendents. Thus there was that necessary complete cooperation in the plan for teaching the supervisory staff.

How the Course Was Set Up. As was previously mentioned, the

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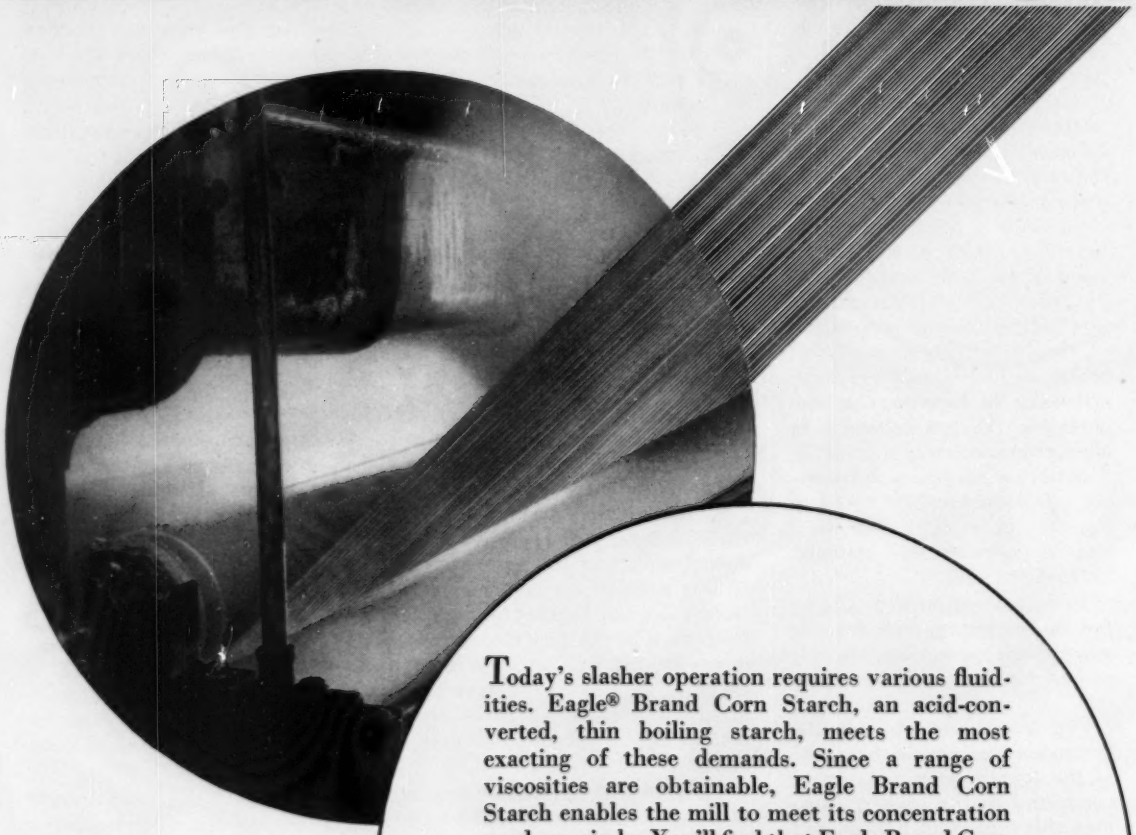

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range of ages of the supervisors eligible to attend the classes was 22 to 62, and each group was selected so that a true cross section of ages and departments would be represented in each group.

Now, in a group of this kind it will be found that, in general, in a textile plant, the supervisors, although familiar with the simple mathematics pertaining to their respective charges (multiplication, division, etc.,) are quite rusty beyond this stage.

It was therefore necessary to work up a course of instruction where the calculations were within their comprehension; in other words, to make it as mathematically simple as possible.

Furthermore, since every operating executive or supervisor, irrespective of what high or low niche he may occupy in the staff, has plenty of headaches during the regular routine of his work, it was deemed unwise to aggravate the situation by any complicated educational procedure.

The plan eventually decided upon was the setting up of a period of one hour a week for the meeting for instructions, lectures, and demonstrations, and the assignments that were given out at each meeting were taken home and worked out during the following week.

The meetings were held on the company's time. Thus there was no hardship on the men, since they had a whole week to do the simple lessons assigned them.

Only the simplest of the statistical methods — frequency distribution, average and range, and control charts — were taken up during the course. It was considered that they were not beyond the capabilities of the groups. Again, it was thought that these methods, simple as they are, when applied could be of tremendous value to the company.

The more intricate phases of Satistical Quality Control such as standard deviation, analysis of variance, correlation, etc., were left for possible inclusion in some future course for the research department. However, there was no objection to any member taking up an advanced study of the subject at the termination of the course.

Ten weeks was the length of the course, which seemed sufficient to train the members in the aforesaid simple methods of statistical quality control.

Results. There has been no reason for the plant to regret its decision to include the older men in its courses. A walk through the various departments after the classes graduated told the story better than words could. The older as well as the younger members had charts hung up here and there in their respective sections. Among the items being checked were sizings, waste, faults, weights of different units such as cones, cheeses, bobbins, and so on.

Congress May Investigate Us

BY RINGGOLD ARDEN
EXCLUSIVE

WASHINGTON, D. C. (AP). A fullscale investigation of the textile industry was urged before the House Rules Committee.

A resolution, calling for the investigation, was introduced by Rep. Lane (D-Mass.). It was supported by representatives from other textile manufacturing states. The measure would have the Joint Committee on the Economic Report, headed by Sen. Douglas (D-Ill.), look into:

1. The widespread and prolonged loss of employment in the industry,
2. The liquidation of long established textile factories,
3. The migration of textile factories to agricultural areas,
4. The loss of foreign markets,
5. The decline of domestic consumption while the demand for other products has been increasing,
6. The economic effect of synthetic fibers and processes upon the textile industry as a whole.

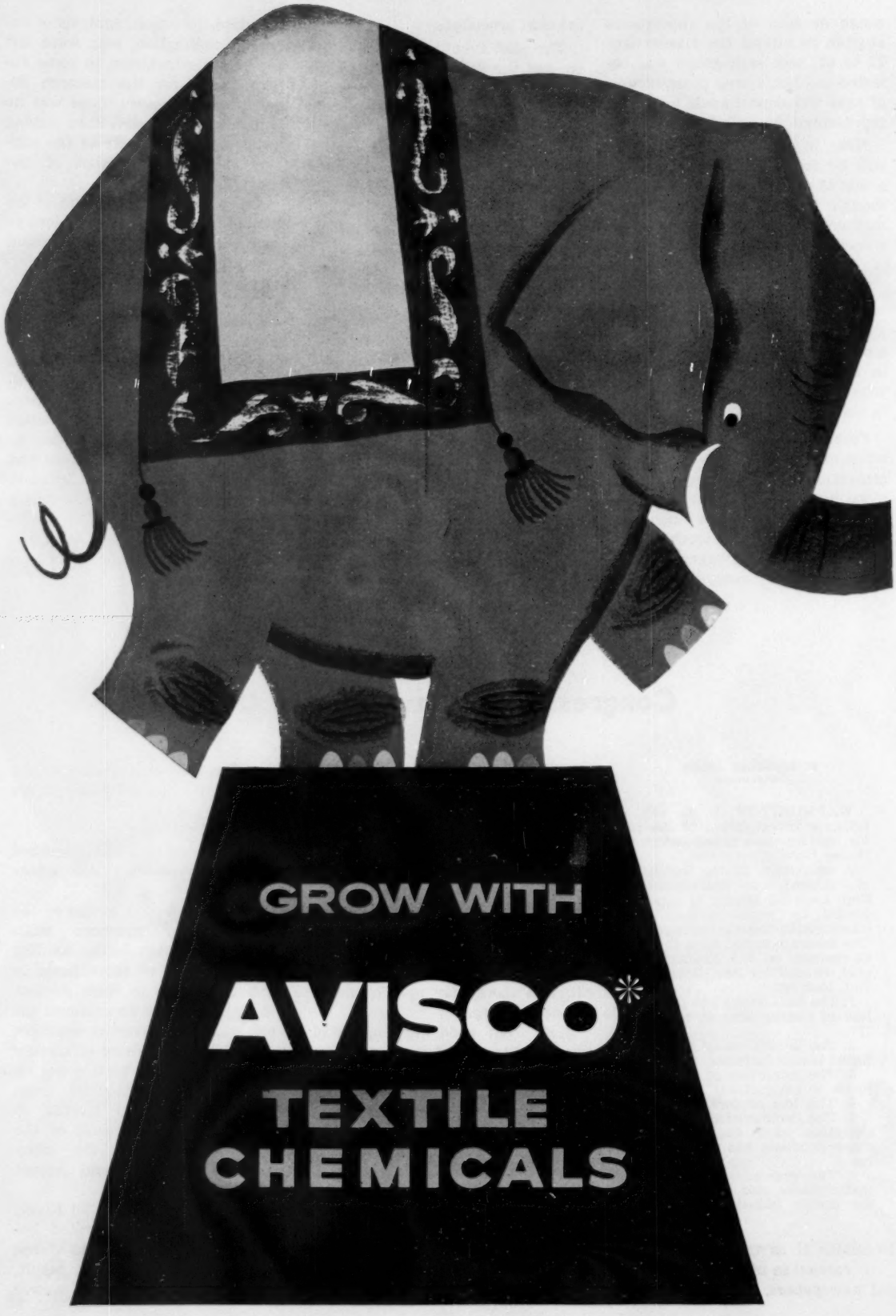
INASMUCH as this dispatch was carried in most of the principal newspapers, a great many of the readers of TEXTILE INDUSTRIES have no doubt read it, and probably noted that all of the Congressmen listed as supporting this resolution were from the northern states, where practically all of the losses in textile manufacturing capacity have occurred. Also, since the investigation was proposed, it now appears that the advocates of such an investigation have cooled off, and there may not be one in the near future.

Just what good the suggested investigation might do is not perfectly clear, because most of the well-informed persons connected with the textile industry already know fairly accurate answers to the questions raised, but very few of these persons have any good ideas as to what can be done about these problems that Mr. Lane has listed. However, to help Mr. Lane if he does decide to search for information about what is wrong with the textile industry, the following comments on the questions he has propounded are offered:

1. The widespread and prolonged loss of employment in the industry.

A great deal of it is due to the liquidation of northern mills where labor union featherbedding insisted on two or three times as many employees as were needed, and as these mills disappeared the work was taken over by southern mills which were more efficiently operated. This has been going on since about 1924, when the great wave of liquidations started in New England as a result of the adamant refusal of the labor unions to recognize and accept modern machinery.

In the single city of Fall River, some 40,000 jobs evaporated because the unions refused to accept the automatic loom. As a result, a Fall River mill could not weave


GROW WITH
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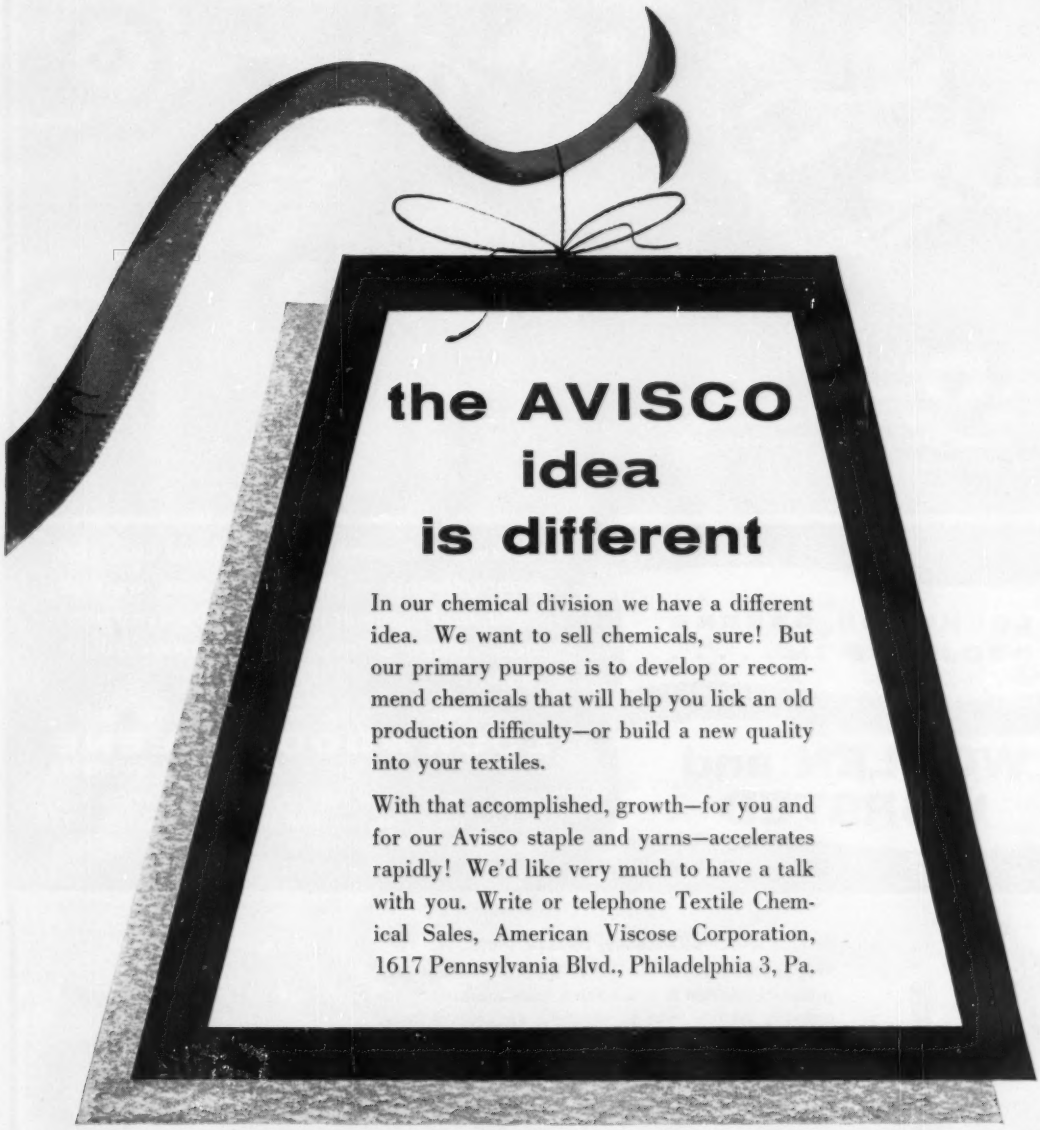

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National Spinning Company, Washington, North Carolina

New Mill making synthetic and worsted yarns. View shows process from pindrafters through roving and spinning.

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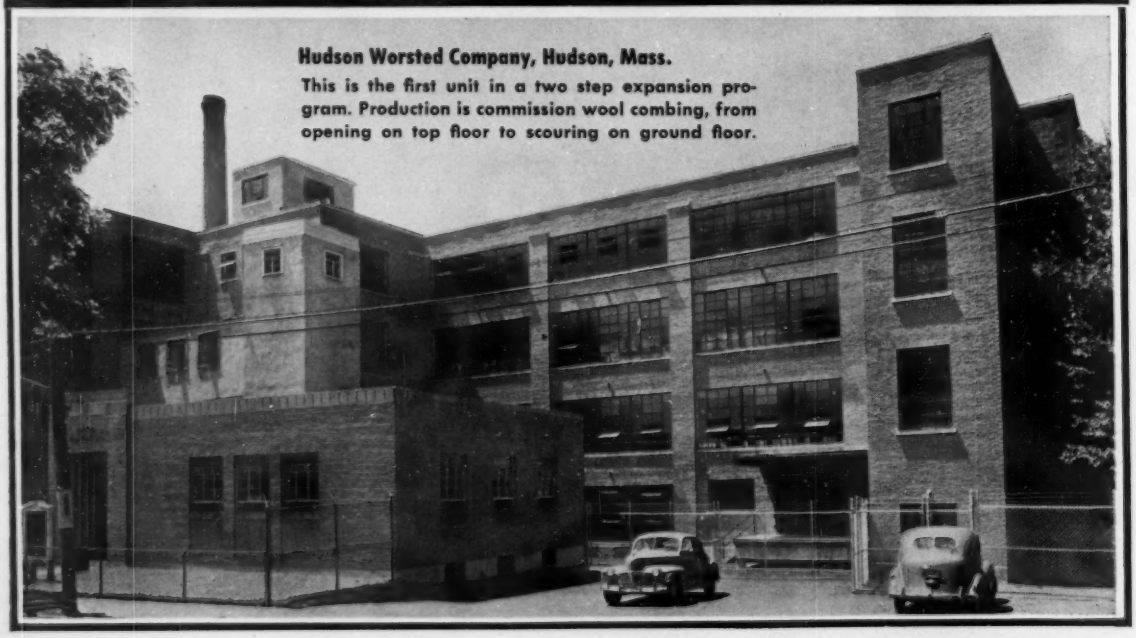


Hudson Worsted Company, Hudson, Mass.

This is the first unit in a two step expansion program. Production is commission wool combing, from opening on top floor to scouring on ground floor.

and sell cloth on the basis of eight looms to a weaver when a competitor was running perhaps 40 or 48. The disparity now would be even greater.

If Mr. Lane is excepting the synthetic fiber industry when he refers to the "textile industry," another loss in jobs would be chargeable to the use of synthetic filament yarns which supplant cotton yarns requiring many thousands of carders and spinners.

One serious problem has been the almost complete shift of the tire cord industry to rayon. A few years ago tire cord used more cotton than any other single item of textile production. Today, the amount of cotton tire cord produced is quite negligible. The mills that formerly produced it have chiefly gone into the sales yarn market, and this has helped to drive more high-cost mills out of business.

2. The liquidation of long established textile factories.

Practically all of these important liquidations have occurred in the northern states, and the reason for most of them can be briefly summed up in two words, "labor rackets." There are minor problems which helped to aggravate the situation, but the rock on which practically all of these northern mills foundered was the difficulty of operating a plant under arbitrary and inflexible and unrealistic labor union rules as compared with operating it with people who would wholeheartedly cooperate with you.

3. The migration of textile factories to agricultural areas.

This is tied in with "2," and the best answer we know to it is one given by the manager of a mill having a plant in the North and another one in the South. Last spring this gentleman remarked that it was a joy to visit their southern plant. The people liked their work and liked the management and were happy in their jobs and anxious to do good jobs. They seemed to like everything about the mill, and there were ten applicants for every job.

The wages, vacation, and other working conditions (other than work loads) were the same at this mill as at the northern mill, but in the northern mill everybody hated the company, hated their jobs, and were constantly dissatisfied. These northern people were unionized, and the labor union people made it their business to keep everybody as unhappy and upset as they could.

This mill manager said he thought it certain that within a few years they would have to close the northern plant and move it South, because it was pretty hopeless to try to run a business where everybody was against you when you knew you could take it to a location where everybody would be for you.

The labor racketeer's livelihood depends on his ability to foment trouble and create discord between the people who do the work and the people who pay for it. The southern textile industry has, up to the present, been remarkably successful in keeping these racketeers either out of their plants entirely, or pretty well under control where the people in mills have employed these outsiders to represent them.

4. The loss of foreign markets.

We are somewhat at a loss to know why this item was included. If we include the give-away programs of the federal government, we have of course had a fictitious foreign market in textiles, but this has not really been a market. In a true market you sell something rather than give it away, and since the average wage in an American textile mill was about $1.40 an hour, and the average wage in Europe ranged from 33 cents to 40 cents, it was a rather hopeless proposition for American mills to compete with those in Europe.

With Japanese wages at about 14 cents an hour and wages in India at about seven or eight cents, the possibility of selling American textiles in competition with those countries was non-existent unless some special dumping trade could be worked out.

Unless the tariff situation is straightened out, Mr. Lane can investigate the loss of both foreign and domestic markets.

5. The decline of domestic consumption while the demand for other products has been increasing.

A lengthy article could be written on this one subject. A part of this decline was mentioned with regard to the shift from cotton tire cord to rayon. Perhaps the biggest decline in the domestic consumption of textiles has been chargeable to changing styles. Anyone who will look around and see what women are wearing today, and remember that it took about 10 or 15 times as much cloth to satisfactorily cover up their grandmothers, can understand one serious thing that has happened to the dress goods industry.

Better built and better heated homes have hurt the blanket business.

The tremendous increase in the number of washing machines in the homes, and the development of detergents which greatly prolong the life of linens and clothing have also tended to reduce textile consumption. Our grandmothers expected a bedsheet to last practically a lifetime, because it was carefully washed by hand with soap. Then came the steam laundry era when textiles were frequently eaten up by the harsh cleaners used in many laundries. The modern washing machine, which treats the clothing very gently and uses improved detergents, has almost certainly had a considerable effect on the durability of textiles in the home.

The paper industry has had a tremendous impact on textiles. Only a few years ago there were a number of large cotton mills making bag goods, and now practically all of this has been supplanted by paper. Perhaps more than a million cotton spindles have been displaced by paper substitutes for cotton goods. Many persons have not seen a cotton handkerchief in years, and the paper towel and napkin have done away with countless millions of yards of cotton cloth each year.

For the past several years the insulation yarn business has been rapidly dwindling as synthetics have been increasingly used for insulating copper wires. We have

(Continued on page 159)

Old Equipment Can Be Adapted to Do New Jobs

STAFF PREPARED EXCLUSIVE

TEXTILE mills located outside of either the Toronto-Hamilton or Montreal manufacturing areas of Canada have a problem: neighboring mills and suppliers are few and far between. As a result, mill men must be capable of working out their own salvation on almost all mechanical maintenance and development work that is required.

J. Lewis & Sons Ltd., Truro, Nova Scotia, is one such Canadian mill. Its knitting division is equipped with 42-gauge full-fashioned hosiery machines, and a variety of ladies' circular-knit hosiery and men's socks machines, including 3½-inch, 260-needle Model K's, and 4-inch 76-needle Komets.

This machinery could be considered dated in terms of age and market acceptance of the products it normally turns out. But it isn't; men in this mill have turned the equipment to new uses and they have made the necessary mechanical changes without help from anyone.

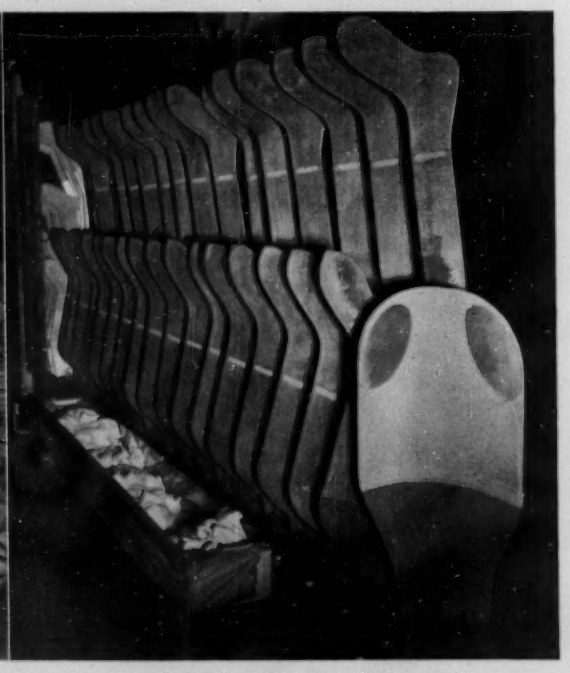
FROM HOSIERY TO PANTIES on the same full-fashioned machine. Unit is a 42-gauge machine with a 14-inch head. A stretch-bulk yarn is knit 12 inches wide, without tension.

Full-Fashioned Work. Part of Lewis' 28-year-old, 42-gauge, full-fashioned hosiery equipment has been adapted to make stretch panties*. This is done on 12 inches of the machines' 14-inch standard

*For the story of how a mill in the United States makes full-fashioned panties, see TEXTILE INDUSTRIES for October, 1954, pp. 134-137.

FROM HOSIERY TO PANTIES in the same inspection and mending department. This operation is preceded by steaming and a four-step seaming operation.

FROM HOSIERY TO PANTIES on the same boarding machine. Size of the specially designed boarding form has to be adjusted to fit in the door of the unit.



head, at a speed of 60 courses per minute. Principal yarn used for the panties is Helanca 72; it is knit without tension, snappers being eliminated by running the yarn over one wire to keep it lined up.

The body of the goods is knit using only one carrier, except at the reinforcing, where a second carrier knits a full-fashioned pocket using Helanca 42. The goods come off the machine 36 inches long and are steamed for a half hour.

Room conditions for knitting these panties have been established at 80 F and 55 per cent rh; when conditions are drier, machines tend to load up.

The panties are next routed to a four-step seaming operation: 1) side seaming with stitch set for stretched goods: 2) top (waist) elastic application on machine on which the guide has a recess to receive and control the elastic, 3) leg elastic application on machine containing a similar elastic control, and 4) tacking of elastic to prevent raveling.

The assembled panties are placed on an inspecting form and inspected for runs, holes, and other defects, and for end and thread cutting.

Final operation prior to packaging is boarding. Boarding forms were designed by the mill to fit a hosiery boarding machine; the size of this form required adaptation to fit the door of the machine.

The Komet Machines. The mill's 4-inch, 76-needle Komet machines were set up and used for years to produce men's work socks, and men's woolen and worsted socks. By using a comparatively fine stretch-bulk yarn, Helanca 102, the same machine is now being used to knit infants' and ladies' socks.

The machine has been adapted to the finer, more delicate yarn by "slicking up" or polishing all rough parts with emery paper. The take-up roll has been smoothed off by wrapping with paper.

The Helanca is knitted under very light tension; looping is done on a machine containing more points per inch than that used for Model K work.

The Komet socks are dyed (where they also are thermo-set), and are finished up with a boarding.

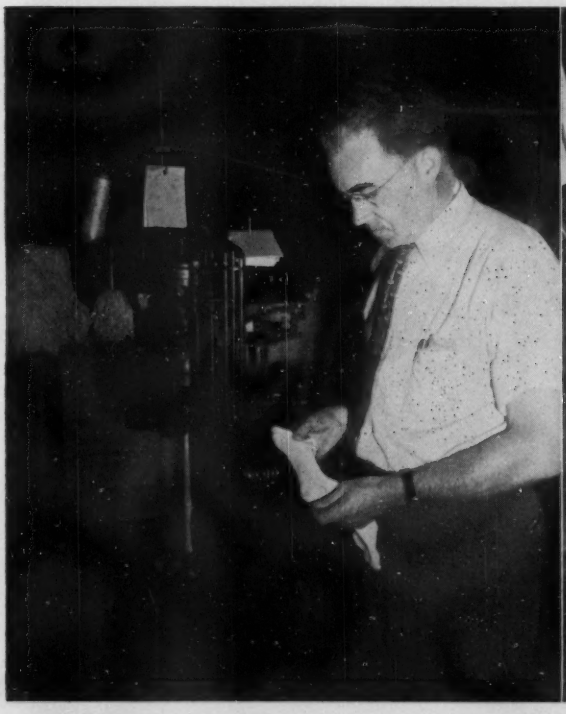
The Model K Machines. Model K's designed for knitting ladies circular hosiery, using a 3½-inch cylinder containing 260 needles, are being used by the Truro plant to produce stretch or coarse yarn children's anklets. Such work would ordinarily require a 36-gauge machine; the Model K's were taken off the "retired" list to do useful work of a different type.

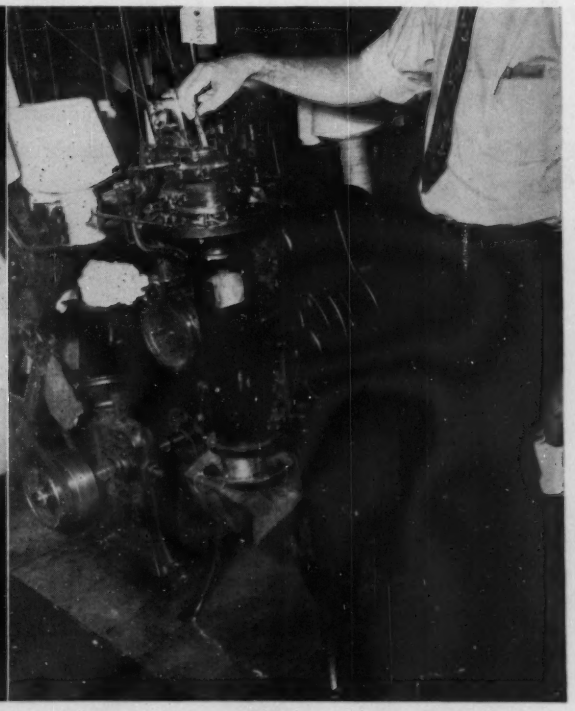
In order to accomplish this, many mechanical changes were required. Every other needle and sinker in the cylinder was removed, an elastic attachment and a striper were added. Needle size is the same as was used formerly in the machine: 54-gauge, No. 90.

When stretch yarn is used, it is a Helanca 72; looping is done on a machine that has fewer points for the Komet work done in the mill.

FROM HEAVY, LARGE SOCKS TO LIGHT, SMALL ONES on the same four-inch, 76-needle Komet machines. By using a stretch-bulk yarn, "slicking-up" the machine, and fine-point looping, infants' and ladies' socks can now be made.

FROM LADIES' HOSIERY TO CHILDREN'S ANKLETS on the same Model K machines. By using a stretch-bulk yarn, removing every other needle and sinker, and adding an elastic attachment and a striper, dated machines were put to work.





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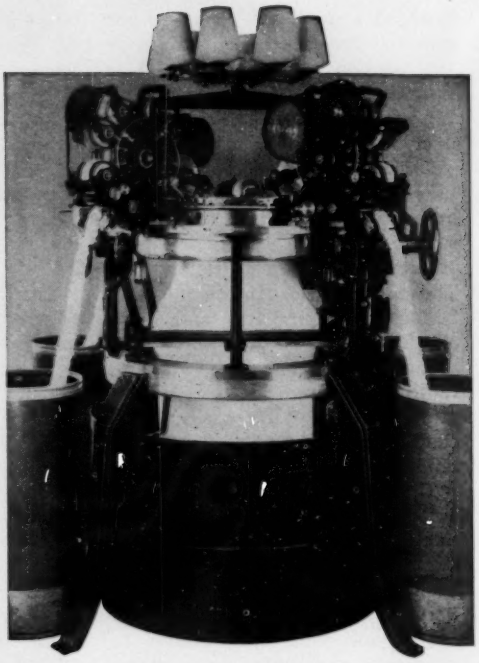

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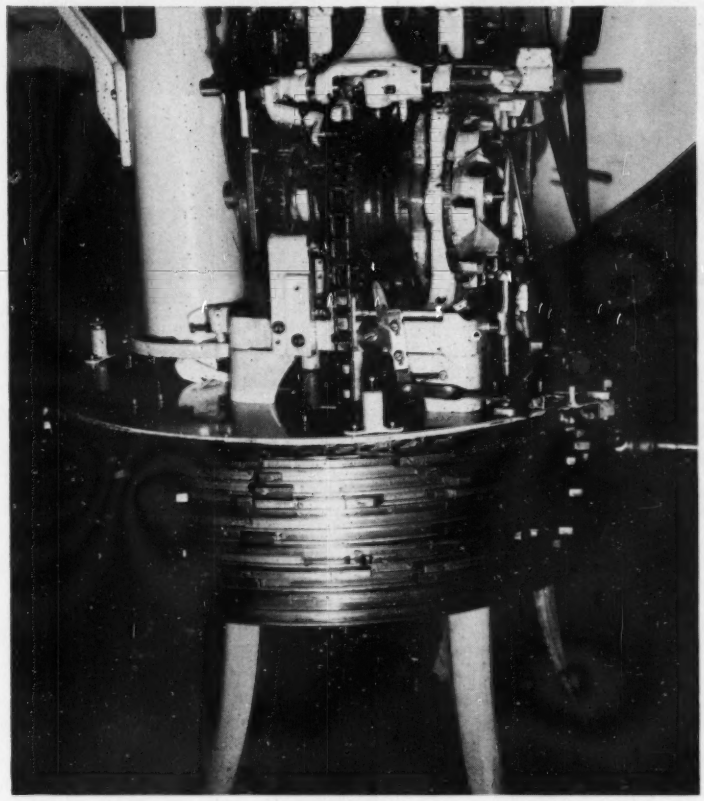
Simple and Efficient Argyle Knitter for Stretch Yarn



STAFF PREPARED

AN ARGYLE knitter designed to knit stretch yarn in diamond patterns with no clip ends inside is in operation at Midway Hosiery Mill, Inc., Hickory, N. C.

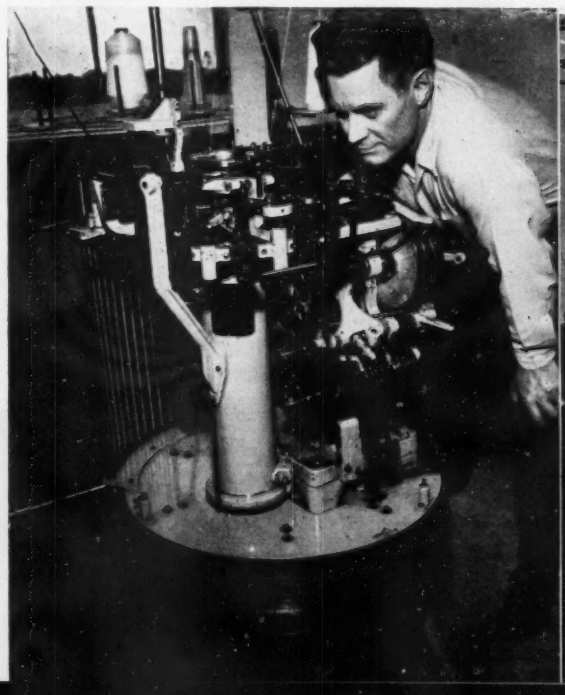
Built by Howard S. Bridges, Sr., the machine has been in operation for more than a year with no trouble. Thirty additional machines are being built initially.

The machine has only one pattern drum with 64 moves, and this is located at the bottom of the entire operating mechanism. The pattern drum is mounted on a vertical axis. The single drum permits simplest possible operating mechanism and a minimum number of moving parts (about one-third less parts). The mechanism can't get out of time or synchronization, thereby requiring minimum fixing.

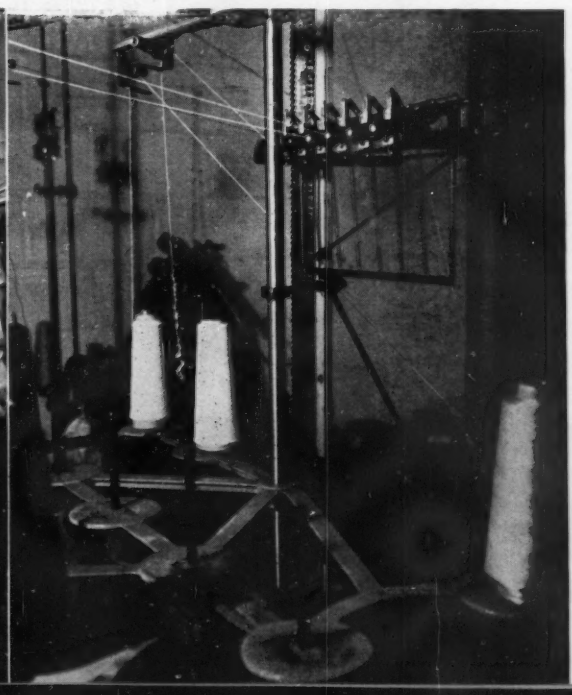
The machine makes about two dozen pairs of socks in eight hours on 160 needles. On 80 needles, production is four dozen pairs of socks

SINGLE PATTERN DRUM has 64 moves, is mounted on vertical axis, is 24" in diameter, and weighs 40 pounds.

YARN CLAMPS are precision made, give no trouble, hold yarn securely. Builder, Howard Bridges, observes machine in operation.

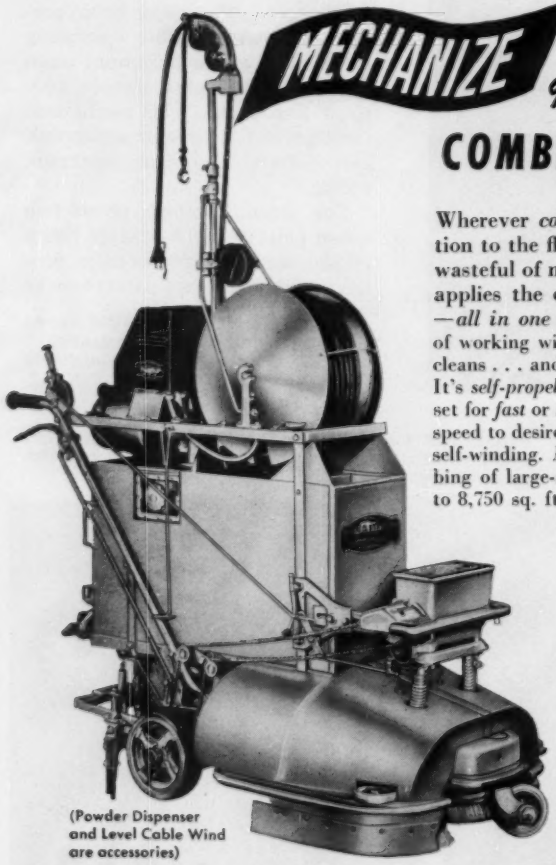


PIN SLIDE for pattern controls movement of pattern drum, returns to starting position by gravity, requires no re-setting.



Let's not clean away dollars and man-hours with costly, inadequate floor care

MECHANIZE *your floor-cleaning with a* COMBINATION SCRUBBER-VAC!



(Powder Dispenser and Level Cable Wind are accessories)

Wherever *combination-machine-scrubbing* is the practical solution to the floor-cleaning problem, any lesser, slower method is wasteful of money and manpower. A *Combination Scrubber-Vac* applies the cleanser, scrubs, flushes if required, and picks up —*all in one operation!* Maintenance men like the convenience of working with this single unit . . . the thoroughness with which it cleans . . . and the features that make the machine simple to operate. It's *self-propelled*, and has a *positive* clutch. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly. Cable reel is self-winding. *Model 213P Scrubber-Vac* at left, for heavy duty scrubbing of large-area floors, has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour!

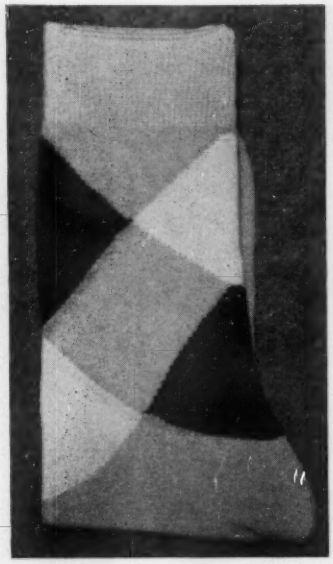
Finnell makes *Scrubber-Vac Machines* in a full range of sizes—for small, vast, and intermediate operations. From this complete line, you can choose the size that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that you can lease or purchase a *Scrubber-Vac*, and that *a Finnell floor specialist and engineer is nearby* to help train your maintenance operators in the proper use of the machine . . . to recommend cleaning schedules for most effectual care . . . and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1310 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES



SOCKS made on new type stretch argyle knitter at Midway Hosiery Mill, Hickory, N. C.

in eight hours.

The method of clamping and shearing the yarn permits efficient operation with stretch yarn. Cotton runs equally well on this knitter. The test machine ran for one week without stopping for anything — not even yarn breaks — on stretch yarn production.

Operation. The pattern drum has 14 rows of cams. Separate fingers engage the cams. These fingers are secured to vertical shafts, and each shaft extends to the mechanism around the cylinder to actuate and effect the pattern changes.

The drum is started and stopped by vertical slide with control pins behind the machine. The control pins in the slide actually serve to start and stop the drum (see illustrations). A novel feature of the slide is that when the pattern is completed the pin slide (or pattern control) returns to starting position by gravity and requires no resetting.

No waste, holes, drop stitches, or seconds have been made on this machine. Cylinder indexing for reciprocating knitting is done by the single pattern drum. The complete machine weighs about 600 pounds, occupies about nine square feet of floor space, and height to top of yarn stand is about six feet.

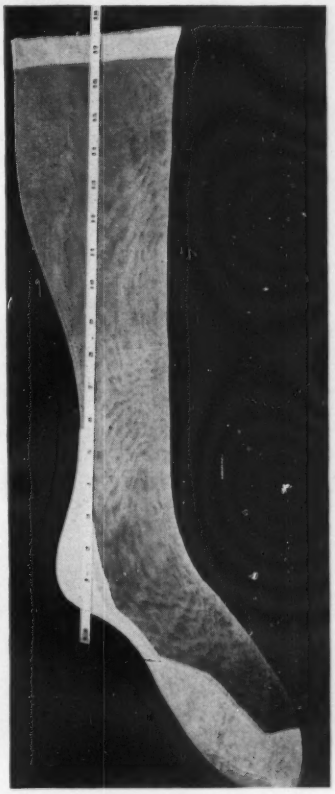
Watch These Details for First Quality Knee-Length F-F Hosiery

BY SAM BOYER
EXCLUSIVE

PRODUCING knee-length hosiery in our full-fashioned plant may be divided into three distinct processes: knitting, then seaming and inspection, and last, dyeing and boarding to final packaging. The last two categories, especially seaming, and also making and attaching the elastic bands, were thoroughly covered by an article appearing in the January, 1955, issue of TEXTILE INDUSTRIES [pages 148-51, 153].

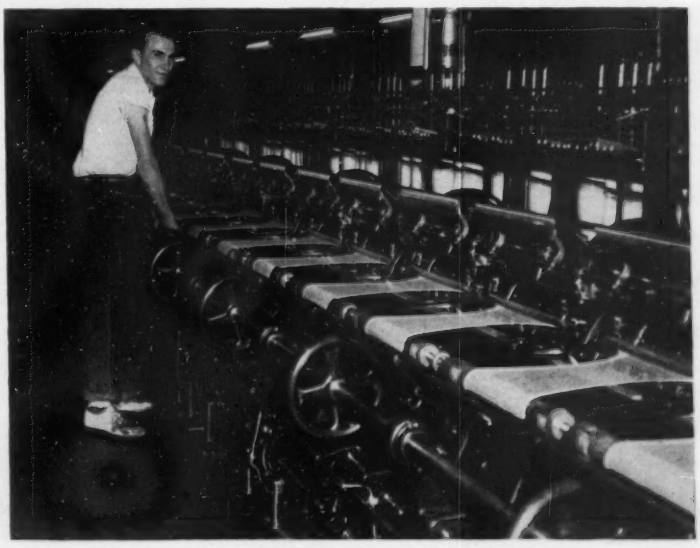
However, so many inquiries have been directed to us about the knitting process that this article, outlining the most important technical details of knitting knee-length hosiery, is released to the hosiery industry through TI.

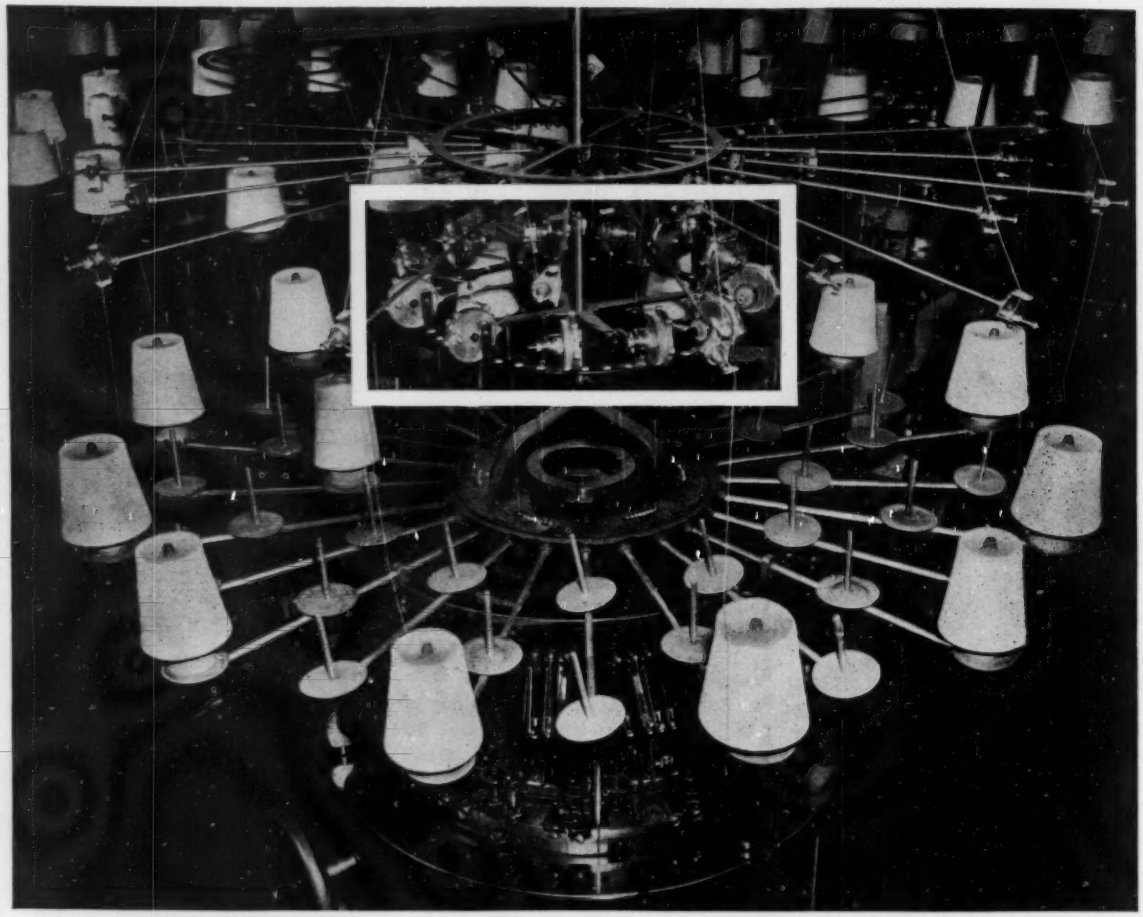
In approaching the problem of producing knee-length hosiery, we chose a course of action that has proved to be logical and is suc-



KNEE-HIGH STOCKING before attaching of band. Over-all length is 17½ inches, with a 5⅝-inch heel. The welt is made of 15-denier nylon, and is lying absolutely flat, as is desirable.

HIGHLY SKILLED KNITTER and Reading semiautomatic knitting machine are a combination that produces top-quality "Knee-High" hosiery.





TEXTURED NYLON: How it's tension-controlled at the Exmoor Knitwear Company

The Exmoor Knitwear Company, makers of EXMOOR sweaters, have instituted a new aid to quality control by using Kidde Standard Compensators on their Leighton Transfer and Jacquard Circular Knitting machines.

Since installing Kidde Compensators, Mr. Morris Hirsch, of Exmoor Knitwear reports:

1. *Irregularities in cone tension have been practically eliminated.*
2. *There is now a more uniform stitch in spite of differences in size or unwinding characteristics of the cone.*
3. *Any waste which might occur through stitch irregularity is now held to a minimum.*

Reports like this are not a bit unusual. More than 500 of the nation's leading textile mills now use Kidde tension devices to help them turn out a *better* product at *less* cost. *You* can do the same. For more information, write Kidde today!

Kidde (K Kidde)

The word 'Kidde' and the Kidde seal are trademarks of Walter Kidde & Company, Inc.

Walter Kidde & Company, Inc.
1090 Main Street, Belleville 9, New Jersey

cessful in producing a top quality product.

First, highly skilled knitters were selected for the production job on the basis of their adaptability to knitting this particular style.

Construction Details. Reading 51-gauge, 26-section, semiautomatic knitting machines are used in knitting the 15-denier nylon "Knee - High" hosiery. The stockings are full-fashioned, of loopless toe construction, and a size 9½ will finish about 18 inches long, including the attached elastic band.

Perhaps the most important detail about the knitting construction is that a ¾-inch welt is knitted on the top, and has a picot to make the two plies fold smoothly in the welt to facilitate attaching the elastic bands, as was described in detail in the previous article.

We experimented with many types and deniers of welt yarns, but found that the very best results are obtained by knitting the welt from the same yarn as is used in the stocking leg. Much difficulty can be met in attempting to attach the elastic bands, if too heavy yarn is used in constructing the welt — it will not fold smoothly when the bands are placed against the welt preparatory to inserting in the sewing machine.

Since we are making a 15-denier welt on a 15-denier stocking boot, the knitters rack the carrier racks in far enough to eliminate the flare narrowings in the stocking construction; they use the same frictions, the same carriers, and the same 15-denier nylon yarn for making both the welt and the leg or boot.

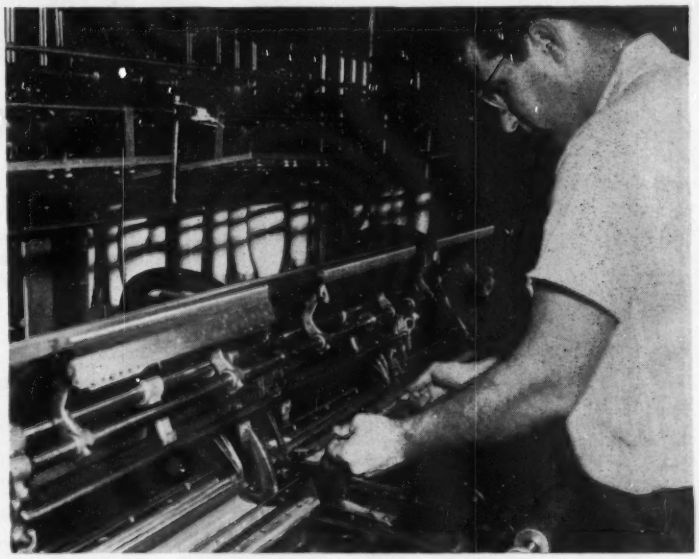
The welt is very short for hand turning, which is one of the reasons for selecting highly skilled knitters for the production job. However, with a little practice they will be able to produce quality work on the welts, and should easily knit from 14 to 16 dozen pairs in 8 hours. Our quality control charts show a very high percentage of first quality stockings from each knitter on this style.

Used Lighter Welt Rod. When first experimenting with using 15-denier nylon for the welts, we found that the standard welt rod, which weighs 927 grains, was too heavy and stretched the welts too much. Finally, we located some 3/16" (OD) stainless steel tubing, which was cut to 16⅞ inches long (the size of the original welt rod); this rod weighs only 273 grains, and has eliminated all our troubles with stretched welts.

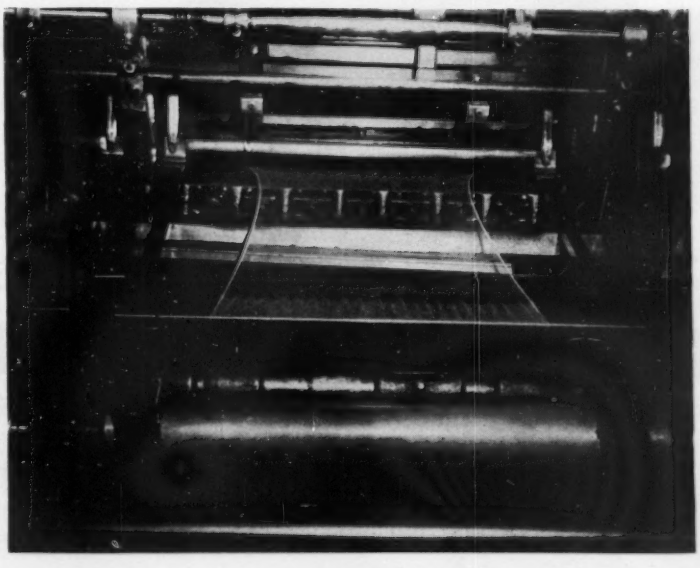
The stainless steel tubing comes in 12-foot lengths, and is somewhat hard to cut because of its toughness. A very fine-tooth hacksaw should be used for cutting the tubing; we found a cut-off wheel unsatisfactory. The ends of the cut tubing should be finished very smooth, so as to prevent picks and pull-threads in the stocking welt.

One of the steel tubing welt rods is shown in an accompanying illustration; it is inserted in the

KNITTER turns the short welt on the needle bar. A full-length unturned welt, with welt rod lying on top, can be seen at lower left.

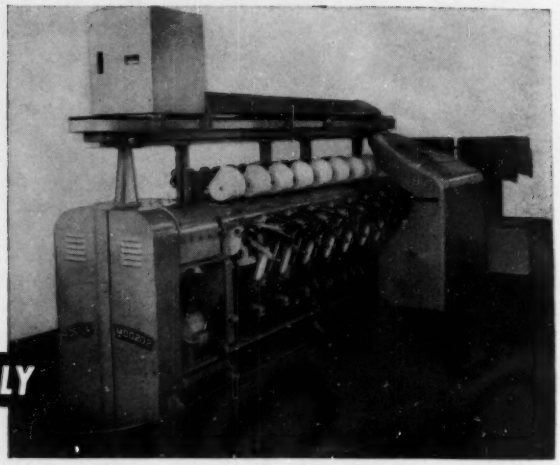


LIGHT-WEIGHT WELT ROD was made in the mill from 3/16-inch stainless steel tubing. It weighs only 273 grains, and has eliminated trouble from stretched welts.

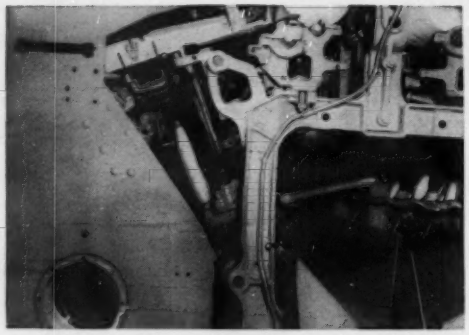


FOSTER MODEL 202

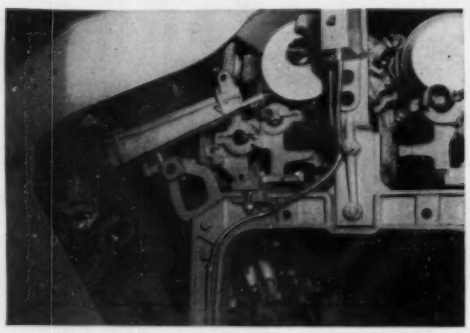
Automatic Cone Winder



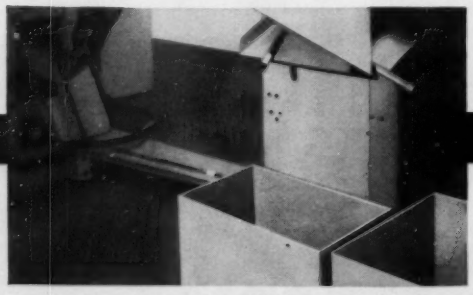
6 OPERATIONS DONE AUTOMATICALLY



Full bobbin moving automatically into supply position. Empty bobbin being doffed to conveyor.



Part of automatic tender which places loose end of cone beside loose end of bobbin and ties them in weaver's knot.



Automatic bobbin sorter depositing empty bobbins in one box and partially filled bobbins in another.

ONLY 3 DUTIES

For Operator

That's why the Foster Model 202 increases production per operator by 100% to 300% (depending on the type and count of yarn) over the best non-automatic winder and why it pays for itself in 2 to 5 years.

The automatic operations are as follows:

1. Spindle stops when end breaks.
2. Automatic tender ties broken ends in weaver's knot.
3. Spindle starts again.
4. Empty bobbins doffed.
5. Empty bobbins carried away.
6. Empty bobbins and partially filled bobbins sorted and put in separate boxes.

And here are the only duties of the operator:

1. Drops full bobbin in chute and catches end in clip in one continuous motion.
2. Dons and doffs cones.
3. Threads up new cones.

And remember, the Model 202 is the ONLY automatic machine which produces cones suitable for knitting. This is only part of the story. Get ALL the facts. Send for Bulletin A-100.

FOSTER MACHINE COMPANY

A Winder for Every Textile Purpose

Westfield, Massachusetts, U.S.A.

Southern office — Johnston Bldg., Charlotte, N. C. Canadian Representative — Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. and 35-37 King St., W., Toronto, Ont. • European Representative — Muschamp Textile Machinery Ltd., Keb Lane — Bardsley, Oldham, England.

short welt and hooked-up on each side by the straps.

Trough Solutions. In knitting knee-length hosiery, we also experimented with several different types of trough solutions; the most successful has been a very thin oil. We first clean all water troughs thoroughly, and fill one-half full with the thin oil solution.

Next, we made wicks for each trough from 40-denier nylon tricot material, which is very closely knitted. The tricot material was cut in strips five inches wide, and running lengthwise with the material. We sewed the strips together, making a 2½-inch tube, and then cut it into lengths 11 inches long. The cutting and sewing was done on an over-edging sewing machine in the grey goods department, so the labor cost was low.

We inserted the water trough rods through the wicks, and then hung them in place in the oil in the troughs. This system works well for running the welt and splicing yarn from pirns instead of from the cones wound by the throwsters. There is also a nice saving made in using pirn yarn instead of thrown yarn.

Results. Successful production of "Knee-High" hosiery has been accomplished by careful preliminary analysis of the entire production problem, by selection of highly skilled operators throughout the plant, and by a carefully coordinated quality control policy extending from the knitting department to the grey goods and through to the final finishing department.

Congress May Investigate Us

(Continued from page 149)

in mind one producer who must have had close to 75,000 spindles chiefly on insulation yarn, who says that this business is gone.

20 or 30 years ago there was a big market for wrapping twine, but the gummed paper tape has eaten into it seriously and threatens to practically destroy it.

A careful investigation would probably disclose several hundred similar instances on a smaller scale where substitutes have reduced the demand for cotton goods, and a great deal of this is due to government pegging of cotton prices, which has literally priced cotton out of the market. Naturally, therefore, the demand for those products which replace cotton goods has been increasing while the demand for textiles has been going down.

The decline in the woolen and worsted industry has been sensational, and has been principally due to the great disparity in cost between woolen and worsted goods made by old-fashioned methods, usually with heavily featherbedded labor, and acceptable synthetics manufactured in efficient mills by modern methods. A piece of Bradford worsted which will sell for ten dollars a yard can hardly be distinguished by the average person from a synthetic selling for two dollars a yard.

The rapidly increasing use of the automobile has had a great deal to do with the decline of the woolen and worsted industry. The humblest workman today steps out of his home into an automobile with a heater in it, and then out of that into his place of employment, which is generally comfortably heated with automatically controlled temperatures. Such a man only needs about half the winter clothing that his grandfather needed when he might have to walk a mile or more to work, in anywhere from chilly to sub-zero temperatures.

6. The economic effect of synthetic fibers and processes upon the textile industry as a whole.

It is not clear whether Mr. Lane includes the synthetic fiber industry when he speaks of the textile industry, but certainly any synthetics which go into yarn and cloth should be considered as textile products, and an increase in the labor employed by the producers of synthetic fibers should be considered when speaking of the shrinkage of labor in other branches of the industry.

The economic effect of synthetic fibers and processes has been enormous, and synthetics will probably continue to encroach steadily upon the older natural fibers. There are several reasons for this, but one of the foremost is that natural fibers have relied upon politics to maintain artificial prices; whereas the producers of synthetic fibers have been restrained by nothing except their own ingenuity in overcoming the natural obstacles to the production of what they are trying to make. Therefore, there was a period when the price of cotton was steadily rising and the price of rayon was going down.

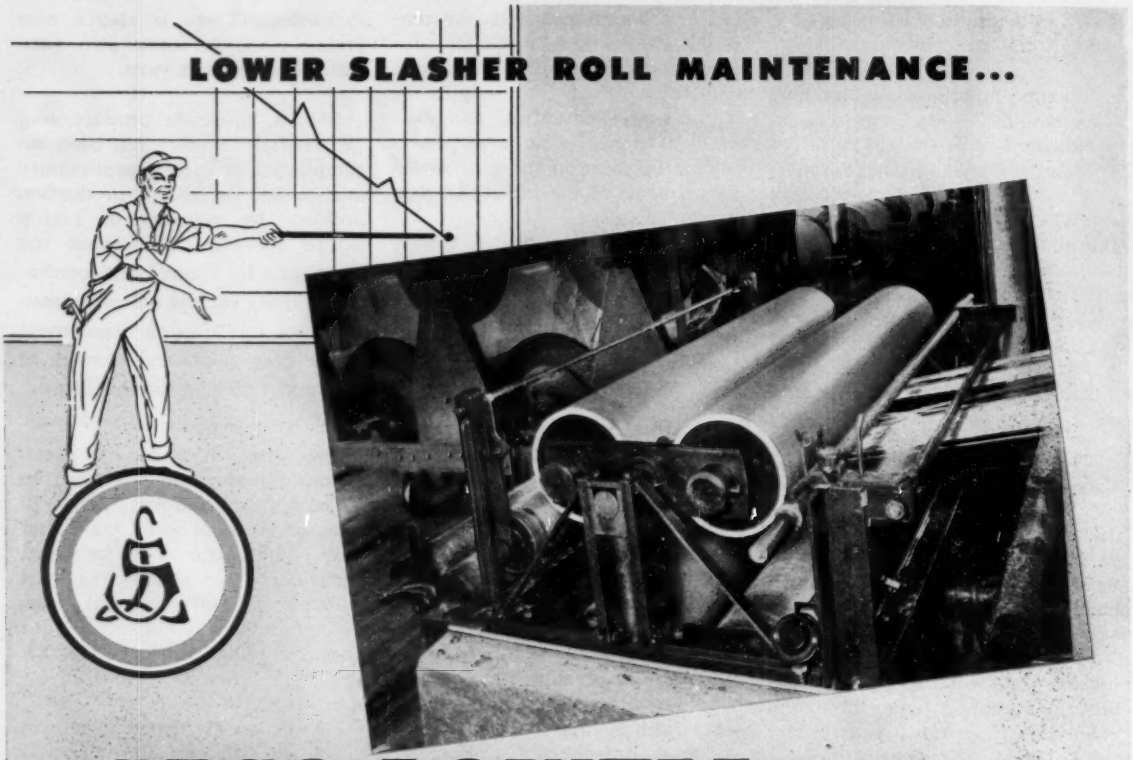
The price of wool has been seriously manipulated within the past few years, and this has driven a lot of business away from that fiber. The carpet manufacturers, particularly, are abandoning wool in favor of synthetics. Likewise, the automobile manufacturers are finding synthetics more satisfactory than worsted or mohair for upholstery.

Textiles must surely be one of the oldest of human industries, and for thousands of years people depended upon textiles for many purposes which can now be better served by something else. It is inevitable that in a rapidly expanding technology like ours we will be finding something better than what people used 5000 years ago for some particular purpose.

Nothing can be done about this and nothing should be done, except to see that the textile industry is permitted to do the best it can under our system of free competition. The northern branch of the textile industry has been denied this privilege, and has therefore pretty generally shut up shop and let the business go to those sections which have been best fitted to handle it.

A great many northern politicians are, and have been, reluctant to admit that the labor racketeers have wrecked the textile industry in their states, but anybody who is thoroughly familiar with the history of the textile industry for the last 35 years knows that practically every textile mill that has moved from the North to the South was driven away from where it was by the policies of the labor rackets.

LOWER SLASHER ROLL MAINTENANCE...



SACO-LOWELL

MULTI-DURO SLASHER SQUEEZE ROLLS

Now you can eliminate constant and costly maintenance of blanket-covered and yarn-wound slasher rolls. The seamless, graduated hardness rubber covering, specially developed for slasher use by Saco-Lowell and U. S. Rubber Co., permits the Multi-Duro Roll to operate satisfactorily for at least two years without buffing.

In addition, the Saco-Lowell Multi-Duro Slasher Roll helps produce superior quality warps because:

- the variable-hardness construction of the rubber permits a constant, even size application.
- A well rounded layer of size is applied on each end individually — shedding in the weave room is thereby minimized.
- Roll is made of special rubber, which, given reasonable care when not in use, will not harden, chip or form blisters at any time.
- There is no lateral seam to cause size roll marks on sunken places across the yarn sheet.
- Rebuffing is not required for at least two years if the roll is given normal use and care.

The Saco-Lowell Multi-Duro Slasher Roll is unquestionably the best slasher finisher roll available today. It is not a conventional roll — do not be misled into accepting a substitute. The Multi-Duro Roll leads to quality slashing and more efficient weaving. Continued evidence that it "Pays to Use Genuine Saco-Lowell Repair Parts".

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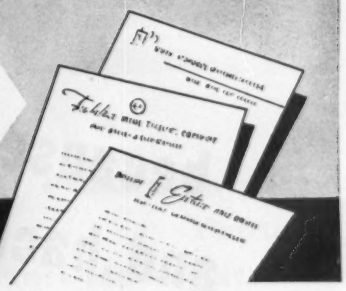
60 BATTERYMARCH STREET, BOSTON 10, MASS.
Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.
SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

HOW OTHER MEN MANAGE

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •



Readers Discuss Proper Design of Spinning Frame Builder Cam

EDITOR TEXTILE INDUSTRIES:

We were having numerous complaints from the cone winders using Roto-Coners that the spinning cops sent forward from the spinning department were sloughing off at the winding frame. This defect was particularly noticed on counts above 40s. The ring diameters in use for these counts were 1½" and 1⅝".

To eliminate this defect a ring frame builder cam was designed to give a sharper nose for facilitating fast unwinding. The existing builder cams were of a ratio 1:2, i.e., the ratio of the rise of the ring rail to the fall of the rail was 2 to 1. This provided a slow rise of the rail and a quick fall to put on a few locking coils.

The new cams were designed with a ratio of 1:3.8, assuring movement of the rails with a constant velocity both on the upward and downward motions.

When such a cam was put on a ring frame, it was noticed that a slight bulge developed near the top of the chase, and the contour of the nose was curved instead of straight.

I would like you to let me know whether this defect arises out of designing a constant velocity cam. Do machinery manufacturers in the United States make any allowance for this in designing their builder cam for the ring frame to produce a straight nose?

CONTRIBUTOR NO. 8787
(India)

[*Passed on to sources of information.—Eds.*]

EDITOR TEXTILE INDUSTRIES:

Concerning CONTRIBUTOR No. 8787's spinning problem, from a description of the conditions prevailing in this mill I would judge that their frames are of English design with the English type of weighting. The toe of the cam will then produce the top of the chase and regardless of the design of the cam, the rail will slow down while the Pitman roll rounds the point of the toe.

With the American type of weighting, with the heel of the cam producing the top of the chase and assuming minimum backlash between worm and cam shaft gear and with *no* dwell in the heel of the cam, we accelerate the heel on the slow rise to make up for the natural dwell on the reversal.

The difference in systems of weighting causes us to run the rail up fast and down slowly for best results.

There is no question but that they would improve the build of the bobbin if they accelerated the cam at the top of the chase.

CONTRIBUTOR NO. 8788

EDITOR TEXTILE INDUSTRIES:

Your CONTRIBUTOR'S information regarding the problem he faces is such that we must assume certain conditions. The ring sizes given and the counts run suggest warp yarns are being made. The ratio of the cam 2 to 1 suggests either a filling wind or a combination wind is used and we will so assume.

We cannot reconcile "a constant velocity both on the upward and

KINK CONTEST!

$100 will be awarded the winner

Send your entry now! This contest ends December 15, 1955

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, December 15, 1955.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

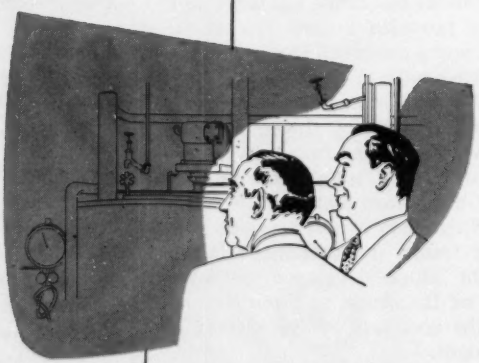
► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to: Editor TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.

because it's always uniform
and backed by Keever service

VICTOR
Mill Starch

is the weaver's friend



Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
1200 S. C. NATIONAL BANK BLDG.
GREENVILLE, SOUTH CAROLINA

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO

Processors of corn, wheat and blended starches for industry since 1898

downward motions" when using a cam with a ratio of 1 to 3.8 if constant velocity means the rail will travel up and down at the same speed. If the constant velocity referred to in the letter means the rail will travel up and down at a uniform rate but not at the same rate for both directions then the ratio of 1 to 3.8 means the rail will travel in high speed 3.8 times as fast as the slower speed, and that is not good.

"The bulge near the top of the chase," if located close to the end of the stroke, is caused by a delay in the reversal of direction of the ring rail.

Filling and combination wind packages usually are softer at the top of the bobbin than at the start of the wind because of decreased tension of the yarn due to less traveler pull. To overcome this difficulty compensation is made in the cam or the arc arm over which the builder chain is connected.

A true constant velocity cam will not produce a good bobbin

In laying out a cam which actuates a follower that is carried from a pivoted arm, the increments of rise in the cam should be laid out on curves approximately equal to the radius distance between the center of the follower and the pivot point of the arm. If the increments are laid out on straight lines radiating from the cam center the cam will not function properly.

There is a certain amount of back lash in the builder mechanism and connections, so in most instances a cam has to be "doctored" on the machine and the pattern subsequently altered to match in order to produce cams which will make good bobbins.

CONTRIBUTOR No. 8789

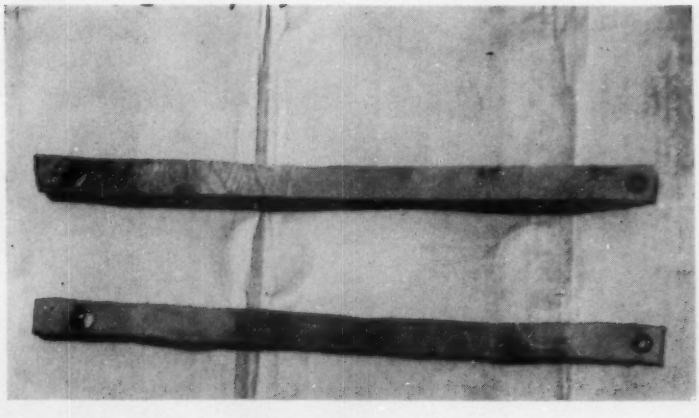
Easy Modification More Than Doubles Life of Heel Straps

EDITOR TEXTILE INDUSTRIES:

We have found a way to increase the life of our heel straps on picker sticks. On most Draper plain looms, the straps are of thin leather cut to the shape of a paddle. The wide part fits over the heel spring casing and stick. These straps brake at the hole on the heel spring.

Our solution is to use 3/16" leather and cut it in a straight line to one inch width. On the spring end we fasten a steel eyelet and grease the eyelet well. This procedure increases the life of the strap more than double. The end where the eyelet is inserted is tapered slightly. The accompanying illustration shows how we make our straps.

CONTRIBUTOR No. 8616



HOW OTHER MEN MANAGE

Plastic Envelope Protects Half-Hose Patterns

EDITOR TEXTILE INDUSTRIES:

When changing patterns on half-hose machines, we found that the graph paper peg set-out soon got very oily from constant handling by the fixer. This resulted in the paper pattern becoming unreadable, and time was wasted having to recopy.

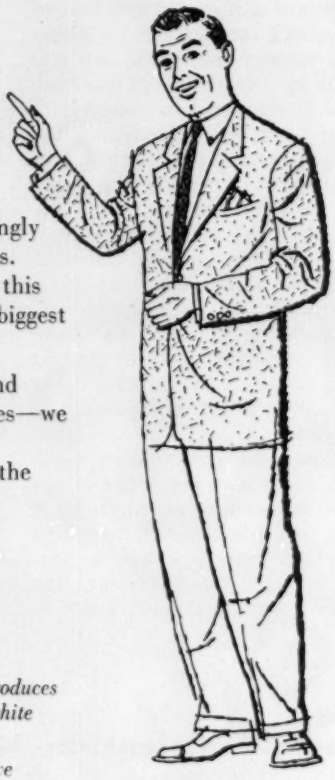
It seemed unreasonable to expect the fixer to keep his hands clean while changing patterns. We solved the problem by inserting the pattern in a plastic envelope or bag. This can be handled with oily fingers without damaging the pattern set-out.

CONTRIBUTOR No. 8809
(England)

Kink Contest Winner!

Winner of TI's Kink Contest ending August 15, 1955, was C. M. Whitcher Midland, Ontario Canada

Let's talk about DETERGENTS



SYNTHETIC DETERGENTS are playing an increasingly important part in textile operations these days. Rightly so, for the really efficient products in this field have helped solve some of the industry's biggest processing problems.

As America's largest manufacturers of soaps and detergents—with unsurpassed research facilities—we offer you an ever-expanding line of synthetic detergents whose efficient performance has won the confidence of many leading textile men.

ORVUS PRODUCTS:

ORVUS NEUTRAL GRANULES—*a neutral anionic detergent*

ORVUS AB GRANULES—*a neutral 40% sodium alkyl aryl sulfonate type*

ORVUS ES PASTE—*a modified sodium alkyl sulfate*

ORVUS HYTEMP GRANULES—*especially designed for cotton processing. Produces sparkling whites . . . sharper contrasts on white backgrounds for prints*

ORVUS EXTRA GRANULES—*a complete synthetic detergent. Basic active ingredient—sodium alkyl sulfate built with complex phosphates*

All four granular types of Orvus are "blown" products—white, free-flowing, dustless, non-gummy. Orvus ES Paste is a white, honey-like liquid at 70° F. All five types of Orvus have superior detergent, wetting, penetrating and emulsifying properties. Safe for processing all natural and man-made fibers and fabrics.

ORVUS

KYRO AC

A new type of modified amine condensate product with soap-like action on wool. Gives a soft hand to all fabrics . . . excellent results in soaping off prints. In fulling and scouring wool fabrics, Kyro AC cuts fulling time . . . minimizes fulling wrinkles and flocking . . . provides noticeably better body to fabrics.

Kyro AC

at your service

If you have processing problems which involve the use of detergents, finishing agents, soaps or wool oils, the services of our Textile Research Department are available to you, without obligation.

PROCTER & GAMBLE
TEXTILE RESEARCH DEPT.
IVORYDALE, OHIO

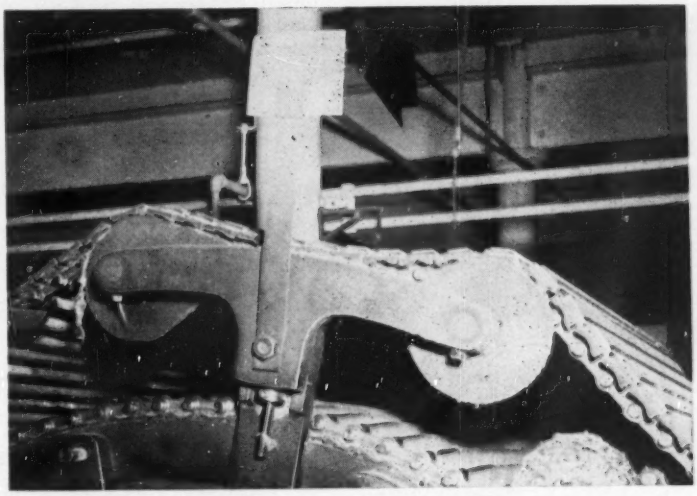
HOW OTHER MEN MANAGE

Install This Bracket for Quick Identification of Stock in Card

EDITOR TEXTILE INDUSTRIES:

For rapid recognition of the type of stock (cotton mix or synthetic blend) running on any machine in our card room, we have attached a simple bracket to each machine. These brackets hold cards of easily distinguishable colors, corresponding to the colors of the chalk marks on the picker laps and roving bobbins and to the marks on the card, comber, and/or drawing cans.

The possibility of the wrong stock going into a machine, and other card room mix-ups in production or sampling are thus minimized.



Similar holders are attached to a harness strap on each loom in the weave room, to indicate the fabric style and type filling yarn. Here they serve a multiple purpose: they avoid filling mix-ups in battery filling, they make for easy supervision, they tell the weaver at a glance which of his looms are running and which are stopped, and they allow for rapid estimates of the room efficiency by a count of the number of flags stopped at any given time.

EDWARD S. RUDNICK

Relining Coal Hoppers Saves Replacement Cost; Rebuilt Hoppers Will Outlast Original

EDITOR TEXTILE INDUSTRIES:

We have two 125-hp boilers fired by stokers, and have found that after a few years' use the coal hoppers rust through their thin metal walls. Quotation on hopper replacement was approximately $130 each, plus freight charges of several dollars.

After some consideration, we decided to line the inside of the hoppers with 3/16″ sheet iron, which is much heavier than the original thickness of the walls of the hopper. The sheet iron was first cut to fit inside the hopper; and, it was carefully fitted to all four sides, was welded along the seam in the corners, thereby making it part of the original unit.

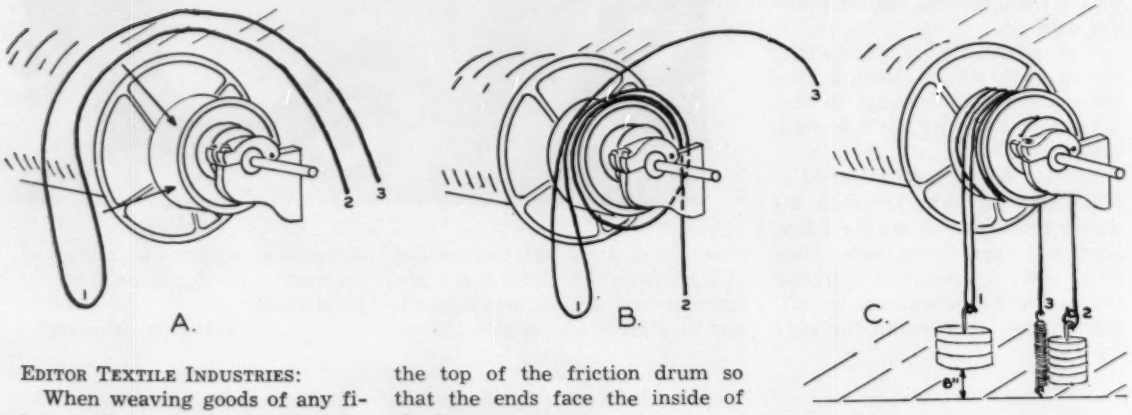
The actual cost of entire repairs for each hopper was only $30,

which was a saving of $100 plus freight for each unit. The external appearance was not changed, but we believe that the rebuilt hopper is much stronger, and will last longer than the original equipment. This statement also applies to some other types of coal hoppers used on different makes of stokers with which we are familiar.

The advantages of this method of repairing are that it is economical, it can be applied to different types of stoker coal hoppers, actual repairing only requires a few hours, and there is no long delay awaiting the arrival of the shipment of a new hopper. We have found no disadvantages of any kind, and it has the appearance of the original equipment.

CONTRIBUTOR No. 8729

Variation of Rope Friction Let-Off Reduces Barre



EDITOR TEXTILE INDUSTRIES:

When weaving goods of any fiber on looms equipped with the rope friction type of let-off, barre marks can be made if the sash cord sticks. The use of a spring in connection with the sash cord, which permits the cord to oscillate and prevents sticking, will eliminate much of the trouble.

The sash cord is doubled as shown in illustration A; the looped end (1) is placed at the side of the friction drum facing the outside of the loom. The ends of the cord (2) and (3) are drawn over the top of the friction drum so that the ends face the inside of the loom.

The outside end (2) is wound around the friction drum toward the outside of the drum, so that the free end hangs toward the inside of the loom (illustration B). The inside end (3) is wound toward the inside of the drum in a like manner, so that the end also hangs toward the inside of the loom.

The loop (1) is tensioned by regular disk weights; the threading of the cord around the friction drum and the anchoring of the free ends (2) and (3) hold it 6" off the floor.

End (3) is fastened to the floor in direct line of its drop from the friction beam by means of a regular spring, such as is used to anchor harnesses.

The remaining free end (2) is weighted so that the weights touch the floor.

The completed hook-up is shown in illustration C.

CONTRIBUTOR No. 8747

Washfastness Ratings Can Be Easily Determined With This Mill-Made Tester

EDITOR TEXTILE INDUSTRIES:

At our mill we occasionally have to make washfastness tests on fabric samples, but we did not feel that our requirements justified the purchase of a regular washfastness tester. Accordingly, we designed and built the device shown in the illustration on next page.

A small motor with a flywheel is mounted on a wooden base. An arm B is connected to the motor at D and at its other ends to a box A. The box is attached to the wooden base by four flexible arms C.

Box A is made to hold two Thermos flasks, which fit exactly

CARDING IS THE FOUNDATION FOR QUALITY

NO. 22

Tips On "Assumptions"

In our own personal lives, we take a lot for granted. It is easy to carry this negative attitude into our daily work. Men in all walks of life are guilty, and we in the textile business, where authority and responsibility are delegated down the line, are probably more at fault in this respect.

This prompts us to direct to you supervisors in the card rooms throughout the textile industry the following suggestions:

1. BOTTLE OILERS

   A routine refilling of the above can become so automatic that it is very easy to "assume" that full bottles are providing sufficient lubrication. Why not be sure *all* bottles are feeding properly by instituting a periodic check of the mechanical condition of *all* bottle oilers? Preventive maintenance of this nature can mean savings to you on card clothing where hot bearings are a menace.

2. CYLINDER FILLETS

   Are the above being neglected to some extent due to automation and competition? Everyday stripping of cylinder fillets by the hand stripping roll method has been replaced by automatic stripping in many mills; and as a result, cylinder fillets are seen only during the time they are out for grinding. Automatic stripping means savings that mills cannot pass up in today's competitive market; but at the same time, damaged cylinder fillets not promptly cared for can reduce these savings. Prompt repair of bruised cylinder fillets and immediate redrawing of "raised" or "blistered" fillets will extend the life of your card clothing.

3. LICKERINS

   The lickerin plays an important role in carding, and the determining factors for replacement of this unit should be given careful consideration. It is easy to "assume" that a lickerin is performing its function properly if there is no visible evidence of damage (bruises, low places, etc.). Damaged wire is certainly a cause for replacement, but do not fail to take into consideration the sharpness of wire, ability to obtain a good even setting, and condition of shafts and bearings.

4. CARD SETTINGS

   Many supervisors "assume" that every setting is made to the gauge. This assumption can approach fact by definite knowledge on your part, through periodic inspection and reports from your grinders on the condition of setting assemblies. You may find in your mill loose flat stands, grinder stands, doffer bearing caps, cylinder bearing caps, lickerin bearing caps, mote knife brackets, plates and screen brackets. To remedy this condition, should it exist, check for:

   A. Rounded off heads on bolts, nuts and cap screws.

   B. Stripped threads.

   C. No washers where washers are part of assembly.

   D. Correct length and threading of bolts and cap screws.

   E. Condition of gauges used in making settings.

   When all parts and pieces making up these assemblies are known to be in good working condition, then have your grinders double-check each setting point after setting, to be certain that all bolts, nuts and cap screws are securely tightened.

5. CYLINDER BEARINGS

   Cast iron cylinder shafts and bronze cylinder bearings have withstood the test of time. However, many thousands of bearings and hundreds of shafts have been prematurely ruined by "assuming" the grease in the bearing is performing its intended function of lubrication. Accumulated lint and waste in bearing housings hinder the flow of grease and reduce the amount of grease that should be applied.

   A periodic check of bearing housings will reduce the possibility of bearings becoming overheated and will increase the efficiency of the grease.

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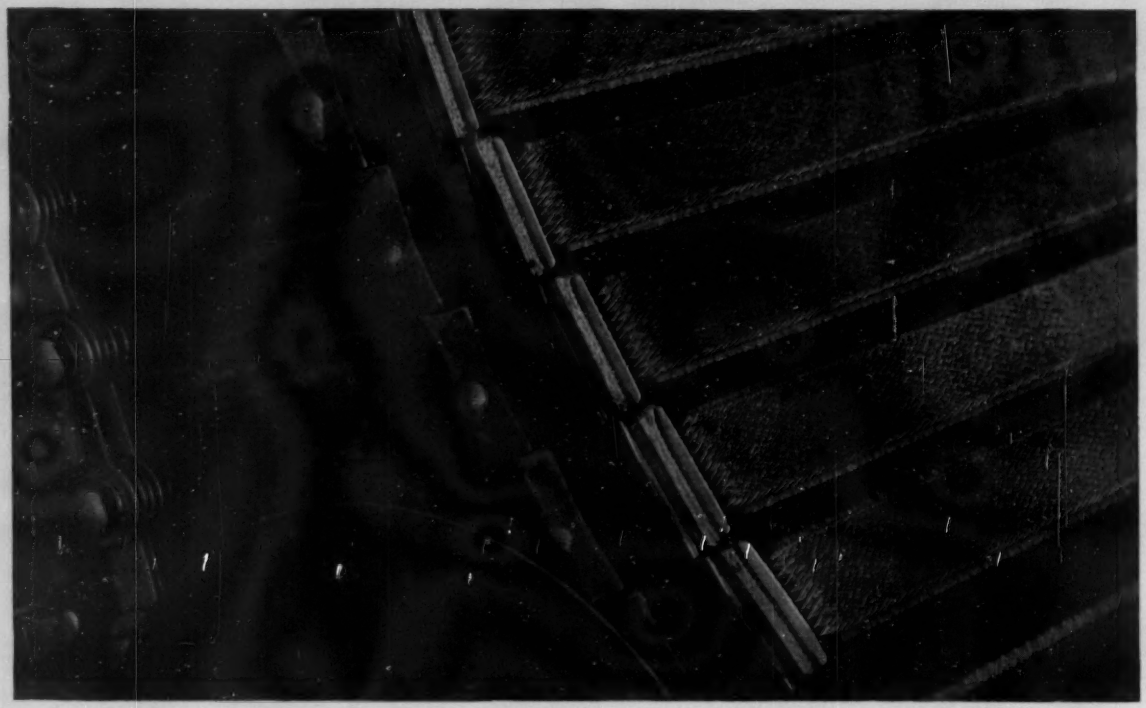
please turn the page ▸



Yes, We Reclothe FLATS

1. For reclothing flats and for other services, we maintain repair shops at Charlotte, N. C., Greenville, S. C., Atlanta, Ga., Dallas, Texas (Textile Supply Co.), Philadelphia, Pa., and Fall River, Massachusetts.
2. While reclothing your flats we can, if you wish, loan you spare sets which will be remilled on the ends, pre-straightened, reclothed with wire desired, ground to gauge, packed in sturdy, specially designed wooden cases and shipped as specified. Just let us know the make and width of your cards, number of flats per set, count of wire and number of sets required. Old flats, in usable condition, will be accepted in exchange for the loaned flats, when the program is completed.
3. All flats shipped to Ashworth for reclothing are thoroughly cleaned after old clothing is removed. The screw holes are checked for condition and depth of thread. Corrections are made when necessary.
4. Occasionally, accidents occur on cards, resulting in one or more broken flats in a set which has good clothing. Such broken flats can be quickly replaced by sending to Ashworth a good flat from the set, with instructions to furnish, clothe and grind flats to this sample flat. Special attention is given such emergency repairs in all of our shops.
5. For those mills interested in having flats reclothed in their own plants, portable equipment is available, along with a competent man to do the work. Details on request.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

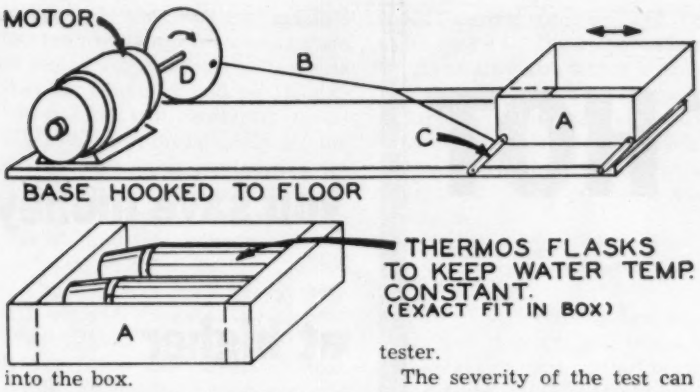
Fall River*†‡ Worcester† Philadelphia*†‡ Charlotte†‡
Greenville*†‡ Atlanta†‡ Dallas†‡ (Textile Supply Co.)
Los Angeles 62, Calif. (E. G. Paules, Representative)

*Factory †Repair Shop ‡Distributing Point

3 FACTORIES • 6 REPAIR SHOPS • 7 DISTRIBUTING POINTS

Ashworth **CARD CLOTHING**

PRODUCED BY AMERICAN WORKERS



into the box.

The samples to be tested are placed in a suitable solution in the Thermos flasks, and the motor is started. The rotation of wheel D causes a back-and-forth movement of box A containing the Thermos flasks, simulating the action of a regular washfastness tester.

The severity of the test can be controlled by having a slot with an adjustable screw on wheel D, thereby shortening or lengthening the stroke of arm B and consequently diminishing or increasing the amount of agitation which the samples receive.

CONTRIBUTOR No. 8806

Open Letter To Woolen Card Builders: "Who Needs a Fancy?"

EDITOR TEXTILE INDUSTRIES:

Let us consider what is sometimes called the heart of the card by many carders but what I call the destructive or "evil" roll of the card: the fancy roll. Many stories have been told about the origin of and need for this roll, and from the beginning of the woolen carding industry this fancy roll has maintained its place. The big question is, "Why?"

Before we go into this question, consider the great differences among fancies. They may be short wired, long wired, open set, closed set, densely wired, straight toothed, variable pitched, variable gauged, pin-pointed, or hooked. It is impossible to obtain good results if the fancy is running too fast or too slow, set too deep or too shallow, set deep on one side and shallow on the other, or if it is out of alignment across the card.

When card waste is excessive, it can usually be traced to either the wrong type of fancy, the wrong speed, or the wrong setting. This assumes, of course, that the other wire throughout the card is in excellent condition and there is only a minimum amount of droppings.

We all know that waste from the card room is very costly. Waste costs the same as does wool in a good piece of cloth, but is worth considerably less. I believe that American card builders should devote more attention to the fancy than to introduction of fancy vacuum bonnets.

There is a movement under way to overcome the "evils" of fancies in the form of an "attachment," and undoubtedly it will be brought to America from Europe. It will be possible to fit this attachment to any style or make of woolen card now in operation, and no doubt would become standard equipment in the manufacture of new cards. The American card manufacturer must realize that there will be a vast amount of business available in re-equipping old models.

CONTRIBUTOR No. 8812

HOW OTHER MEN MANAGE

Yarn Counts Can Throw Off Cost Calculations

EDITOR TEXTILE INDUSTRIES:

A weaving mill buys yarn by the pound, but usually sells cloth by the yard. Although bought by the pound, the price of yarn is really governed by the length of yarn in each pound. That is, the price per pound is governed by the counts of the yarn.

When buying one pound of 10s cotton yarn, the mill should receive 840 x 10 = 8,400 yards, or 840 x 20 = 16,800 yards of 20s count yarn. The higher or finer the count, the higher the price per pound. When calculating the cost of producing a yard of cloth, it is generally assumed that the counts of yarn are correct, or within a reasonable tolerance of slightly finer to slightly coarser, but averaging correct counts.

Spinners who sell yarn to weaving mills are very prone to deliver yarn on the coarser side rather than the finer side. Also, a little excess humidity to increase the natural weight of the yarn is not unknown.

Whether the yarn is bought by the weaving department from outside sources or obtained from its own spinning department, careful and regular checks on the weights of yarn received, and on the actual counts of that yarn, should be made. Any variations can easily nullify the carefully calculated cost of the cloth being produced.

All cases of yarn should be carefully checked on receipt, and the gross, tare, and net weights verified. The cost of a good type of scale for this purpose will be repaid in a very short period by allowances claimed for errors in weight.

The actual counts received, compared to the counts supposed to be in the case, should be verified by

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Continuous high temperature de-sizing has been adopted by virtually every large dyer and finisher in the country. The majority of these use RAPIDASE. One reason is that of all enzyme de-sizing preparations, RAPIDASE is most heat resistant and consequently most suitable for the speedier and more economical de-sizing at higher temperature.

WALLERSTEIN COMPANY, INC., 180 MADISON AVENUE, NEW YORK 16, N. Y.

testing at the earliest possible moment, certainly before the yarn is issued for processing. Suppose that the counts should be 10s cotton, but the test constantly shows 9½s. This is approximately 5% too heavy. The cloth produced from such yarns would contain 5% more weight of yarn in one yard than was allowed for in the costing department calculations.

The buyer of that heavy cloth will not add 5% extra to his check when paying for it. The mill will lose 5% of the calculated cost. While the weight of yarn was correct, the length was short. Instead of receiving 8,400 yards, the length actually received was 7,980 yards for each pound of yarn so bought, a loss in length of 420 yards of yarn, which could soon be 420 yards of cloth. Such losses, if not checked, make the costing department figures valueless.

The figures obtained by calculating the average counts on the section beams produced at the high speed warper provide the most exact check for the combination of length and weight, which is dollars and cents in textile language.

Suppose a high speed warper runs on one beam 20,000 yards of 360 ends of 16s count. The net weight of yarn on that beam should be

$$\frac{360 \times 20{,}000}{840 \times 16} = 535.64 \text{ lb}$$

But by first weighing the empty beam and then the full beam, the net weight of yarn on that beam is found to be 550 lbs, therefore the actual count is not 16s, but

$$\frac{360 \times 20{,}000}{840 \times 550} = 15.58 \text{ actual count}$$

which is 2.625% too heavy—not a reasonable tolerance. A reasonable tolerance would be 2% heavy, provided that it is compensated for by a like amount of yarn 2% light. 2.625% continuously heavy must throw the costing departments figures out by that much in dollars and cents.

So far the checks have been against the spinner. It is still possible to go wrong in the cloth weights per yard, even though the spinner provided correct counts. Wront opinions, wrong calculations, human errors, can take place all along the line.

It is not a hard, nor a costly task, to make a quick check of the lengths and weights of all cloths as received from the looms. By so doing, the weight per yard, or the yards per pound, is quickly obtained, and verified against the standard accepted by the costing department. Any errors or variations from standard are quickly traced to the cause.

These methods or others of a similar nature will at least keep the cost within those figures calculated by the firm's costing department. They will go further. They will provide pointers that will possibly tend to lower the calculated cost, and which is the yardstick by which we sell or go out of business.

CONTRIBUTOR No. 8813

An Executive Views the News in Textiles

(Continued from page 99)

the garment industry with regard to Jap competition. It may be that they have been vigorous in opposition to the State Department plan to transfer American jobs to the Orient; but, from our very limited viewpoint, we have some doubt that the apparel people are as exercised as some of the other groups.

Finale

Just for a change of pace, suppose we forget about the Japanese (Ah, to forget about them permanently!) so that we may call to your attention the fact that a considerable problem exists from raw cotton that has been stained by the bagging around the cotton bale. The casual reader may confuse this with our old and long-suffering friend, the "tar spot problem," but this is not quite the same thing. What we have reference to now is a condition which comes about because the jute bagging around the cotton bale has been contaminated in some way and this dye comes off on the cotton. This results in streaks and stains in the yarn and in the grey goods.

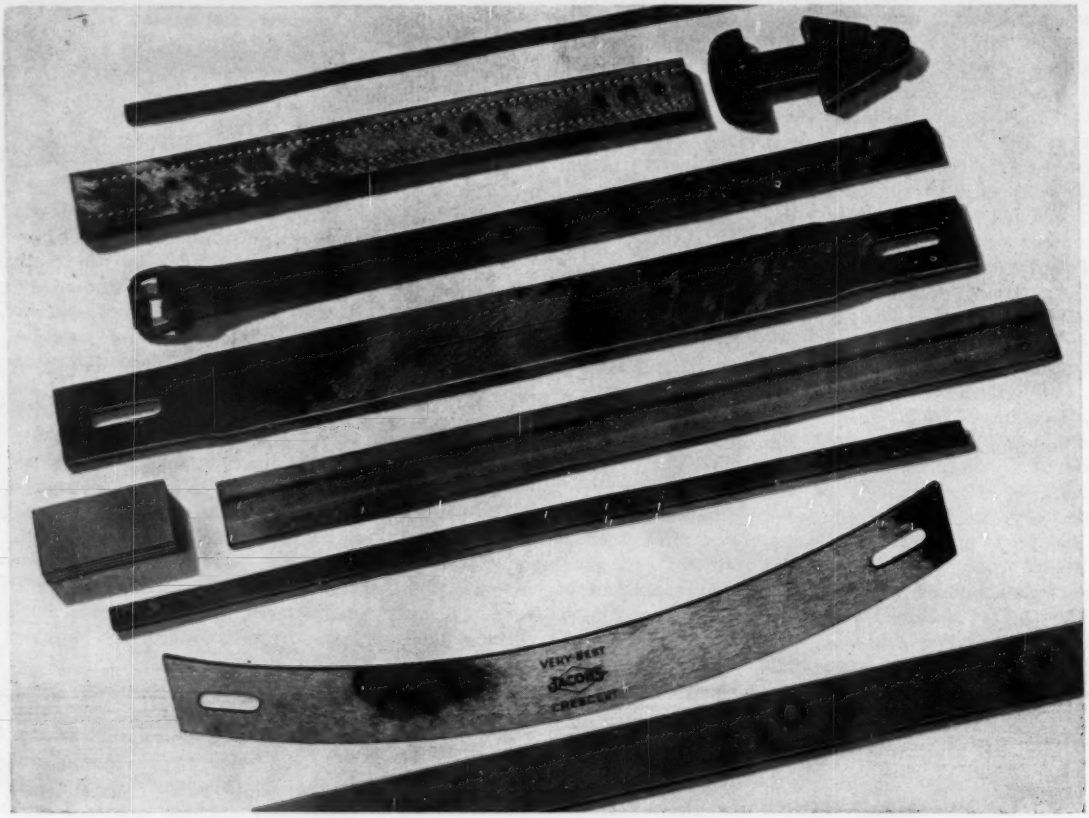
The only sensible solution we have heard of to this problem is for mills which encounter stained jute bagging to dispose of it in some channel where it will not be sold back to the cotton gin. It is only human nature that if the cotton gin buys the bagging, it is going to use it because it has an investment in it. The mill, on the other hand, being the one most likely to suffer from such stains, should take the initiative in seeing to it that the gin does not have the opportunity to buy bagging which has been contaminated.

With this sane and sobering thought, we leave you for the time being. As we said at the beginning of this piece, sometimes the passing textile scene leaves us "with naught but grief and pain, for promised joy."

Guide Lines Woven Into Duck for Hampers

Production of duck at one southern mill has been modified to include colored picks woven into the goods at intervals appropriate to sewing pockets for wire reinforcements. This operation is performed in the manufacture of hampers which is done at another of the company's plants.

The guide lines, it is said, eliminate time and cost factors required to mark the placement of the wire pockets manually. The guide lines are woven in a range of 13 patterns to accommodate the various types of hampers made.



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Fast Deliveries!

Strapping in all styles and sizes now expertly made both in Charlotte, N. C. and Danielson, Conn. Immediate delivery from closest point.

Only the very best **HIDES** are used by Jacobs.
Careful control of **STORING** at exact humidity.
Accurate initial **CUTTING** of blanks to order.
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Custom cutting and **SHAPING** to customers' order.
Jacobs "Verybest" **EMBOSSING** for identifying.
A critical final **INSPECTION** before shipping.
Prompt service on **SHIPPING** eliminates delay.

***"Verybest"* IS MORE THAN A NAME, IT IS A STATEMENT OF FACT.**

THE BULLARD CLARK COMPANY

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

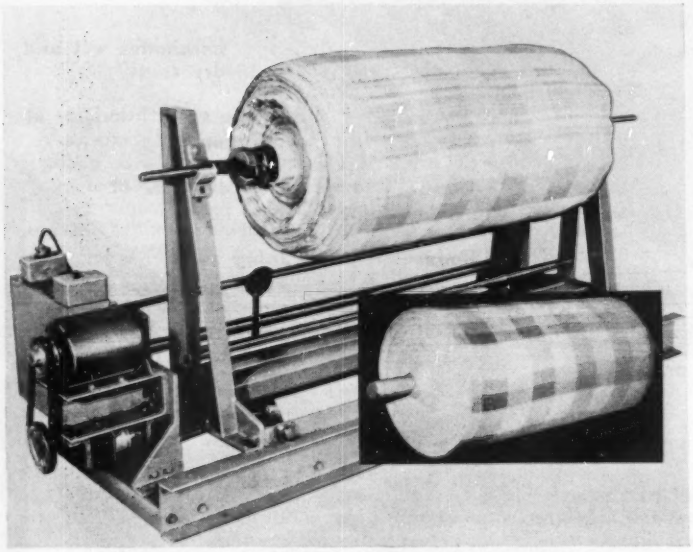
NORTHERN DIVISION
Danielson, Conn.

Textile Industries

for October 1955 presents

NEW EQUIPMENT PARADE

Machines and Equipment . . . Supplies and Services . . . Dyes and Chemicals . . . Books



Automatic Guiding Unit Assures Straight-Wound Rolls of Cloth

Placed in front of any machine (or processing unit) where it is important that material enter straight and come out straight, a newly developed lef-off guiding unit will provide evenly wound rolls of cloth, paper or plastic batched material.

Operation is simple. When set to the line of the selvage or edge of travel, the sensing device actuates the automatic guiding unit electrically which, in turn, moves the carriage to keep the material running straight and smooth.

Hermas Machine Co., Warburton Ave., Hawthorne, N. J.

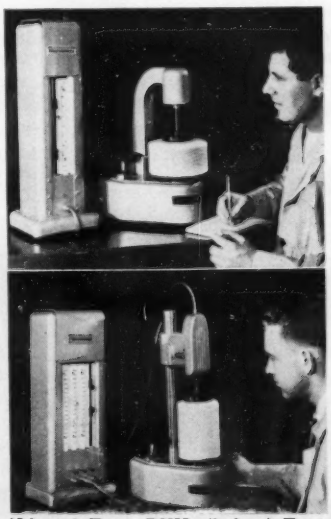
More data? Write ◂ or use card, p. 201; list K-101

Package Density Comparator Is Aid in Winding and Dyeing

The need for a simple, accurate, and quick-acting instrument for checking or comparing dye packages and indicating numerical values for degrees of density is fulfilled by the Sheffield Dye Package Density Comparator. The reading is practically instantaneous.

One hundred per cent check of dye packages is practical with this instrument as up to 25 or more packages per minute can be checked, depending upon the operator and working conditions. This makes it feasible for all dye packages to be checked, classified, segregated, and labelled if desired, so that variations in the shades of dyed yarn can be minimized and even eliminated.

Since hardness or softness of dye packages is usually proportional to permeability, the numerical values indicated by the instrument can also be considered as a definite index to softness and hardness. Packages which are too soft and those which will permit "channeling" wherein the dye liquor takes the path of least resistance and causes uneven dyeing, are indicated.



(Above) Type BVH; (below) Type UN

Depending upon the type, dye packages at prescribed minimum and maximum density limits will have readings ranging from less than one inch to more than six inches apart on the scale of the Sheffield Comparator.

The instrument can be used in the winding department to facilitate winding uniform packages. It will indicate spindles which are winding too soft or too hard packages.

When new yarn is run for the first time, test packages can be wound, checked for density on the Comparator, then dyed so as to determine correct package density and winding conditions. Similarly, the instrument

The Amazing PNEUMAFIL CENTRAL AIR SYSTEM

"Eliminates wet and dry spots"

"Puts the same humidity at every spindle"

"Removes at least 20% of spinning room heat"

"Reduces room cleaning 30%

Quoted from actual mill "before and after" reports

What They Didn't Tell:

. . . was what makes these results possible. Central Air System maintains an ideal distribution of conditioned air in the yarn processing zone—providing a constant humidity, a consistent temperature and a uniform air pressure . . . at every spindle.

To accomplish this, Central Air System reduces the room heat load from spinning machinery by discharging it to the outside on hot, dry days—or on cold days, returning it as conditioned air. All this is achieved by automatic air blending dampers.*

Central Air System equipped spinning rooms are clean rooms—fresh and pleasant to work in.

Engineers now recognize Pneumafil Central Air System as an adjunct to air conditioning—saving as much as 25% of air handling capacity requirements.

*Patented

PNEUMAFIL CORPORATION
CHARLOTTE 8, NORTH CAROLINA

Pneumafil Economizer Unit System
Central Air System
Central Material Recovery System
Lint Free Creel
Pneumastop ®
Pneumacard ®

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PRODUCTS OF PROGRESS >>

Atlanta, Georgia *Needham Heights, Mass.*

can be used to check out new or repaired winders.

Simple and rugged, the instrument can be used right in the dye room, on the winding department floor, or in dye package receiving or store rooms. No controlled atmospheric or laboratory conditions are required.

No special skill is required to operate the apparatus — it is merely loaded and unloaded and the reading observed and recorded if desired. A relatively small volume of air is required, a portable compressor supplying 3 cfm at 60 psi pressure being sufficient.

Two types are available: (1) the "UN" Universal Type for mills and dye houses working with a wide range in sizes and shapes; and (2) the "BVH" Block Variable Height Type for those plants which process only one or a few packages of different heights. Precisionaire Column Instruments are used as the indicating medium.

The Sheffield Corp., Dayton 1, Ohio.

More data? Write ◂ or use card, p. 201; list K-102

Four-Speed Material Drive for Evenness Testers

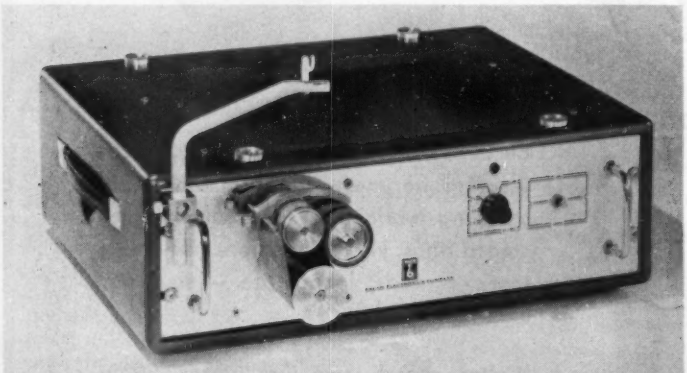
A Material Drive for the testing of yarn, roving or sliver, which can be driven at a uniform speed preselected by the operator, can be used with any company's evenness testing equipment to form a highly efficient system. The selector switch gives the operator a choice of four speeds at which to drive the material — .5, 1.5, 5 and 15 feet per second. Designated as Model BL-850, the material drive was designed as a companion instrument to the Brush Uniformity Analyzer. The unit is easily mounted in a standard 19-inch vertical rack. Two portable cases are also available.

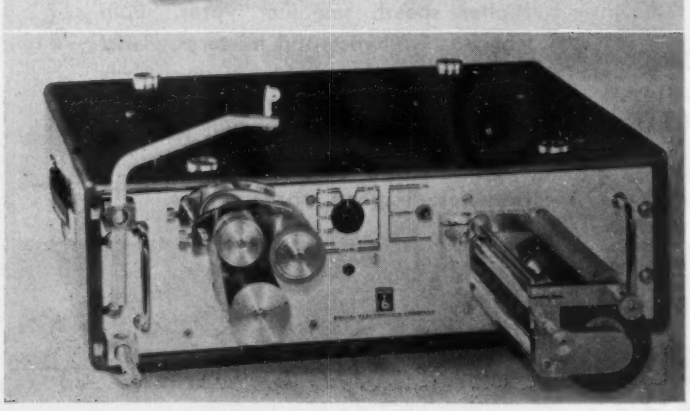
A combination Material Drive and Yarn Rewind, designated as Model BL-853, has also been announced. The rewind feature of the instrument is desirable where the same length is to be retested for the establishment of an average. The rewind unit will prepare the yarn smoothly and evenly so that it can be readily rerun. It operates at a constant 5 feet per second. Either rack mounting or portable cases are available for the unit. It can be rack mounted easily for permanent installation to be used with other equipment.

Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio.

More data? Write ◂ or use card, p. 201; list K-103

(Above) 4-Speed material drive by Brush. (Below) The new combination material drive-rewind unit.





Device Kills Static at Creel

Broken and tangled ends at the warper creel due to static electricity can be avoided by utilizing a special design of the Oxy Cold Bar static eliminator that is applicable to creels of all makes and sizes.

Eyebars at the front of the creel are each equipped with a miniature Oxy Cold Bar, and all bars take their power supply from the same power unit. This arrangement produces an intense ionization that effectively neutralizes each end of yarn and promotes a smooth even flow through eyebars and warpers.

The units are so safe that connections to the bars themselves can be removed while power is on, without danger of shocks or other hazards.

Smooth, even warps are produced by the use of Oxy Cold Bars, which may be easily installed in about two hours. Compact, they fit in even the most confined places. The bars require no maintenance, and the small amount of electricity they use is taken from any 110 volt a-c lighting circuit by means of an ordinary cord and plug connection.

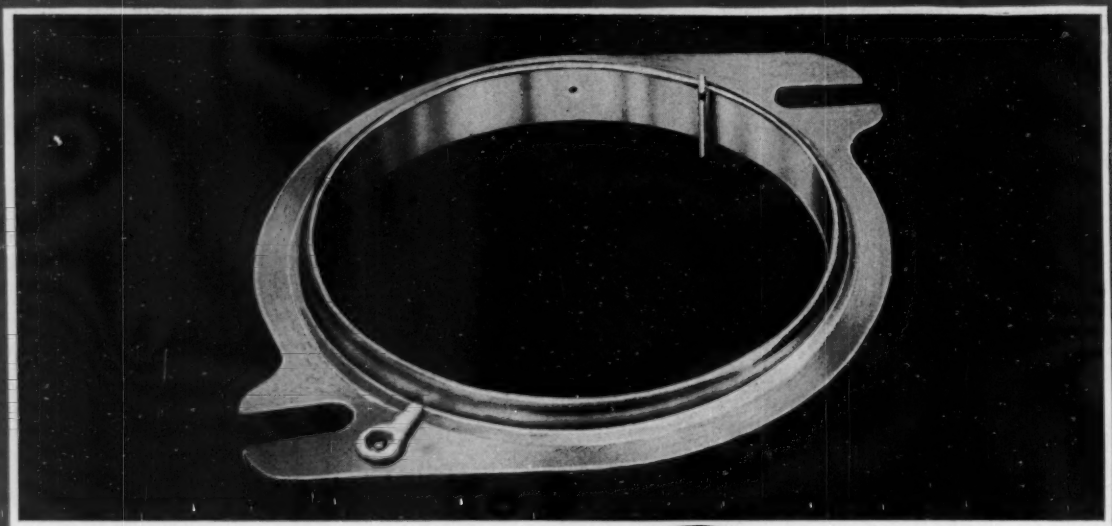
Herbert Products, Inc., 74-32 Jamaica Ave., Woodhaven, N. Y.

More data? Write ◂ or use card, p. 201; list K-104

Wet Processing Aids

"Calen-Aid" D22, a polishing agent containing silicones and waxes, when used in resin treating solutions, produces a high luster on calendered and embossed finishes with a minimum number of passes through the calender. It can also serve as a softening agent for non-calendered finishes.

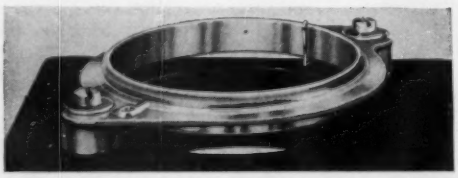
The resin coupling agent, "Poly-Coupler," has recently been introduced in a new concentrated form. This product is used in resin solutions



AFTER YEARS OF RESEARCH —18 MONTHS OF MILL TEST

OIL ONLY ONCE IN 24 HOURS

Can't run dry; no carbonizing because no wicks. Filter pads at ports only; big oil reservoir.



NO MONDAY MORNING GRIEF WITH CAKED-ON FLY TROUBLE

Raised above ring-rail, fly cannot collect; just blow—it's clear. It can be set flush on ring-rail.

Ragan SELF-LUBRICATING Rings ARE READY

Because of special heat-treating, wear-resisting hardness, super-smooth finish, unfailing lubrication, they outwear machined rings, *yet cost no more*. Balanced traveler wear, longer life — so fewer ends down.

Higher speed; smoother yarns. *Spin* worsted, synthetics and mixtures. *Twist* cottons. Now available in two sizes 2 3/4 x 7/16; 2 1/4 x 7/16.

4 leading makers can promptly deliver travelers designed for these rings.

Ragan Rings

RAGAN RING COMPANY
The only manufacturer of Textile Rings in the South
901 S. MAIN STREET, EAST POINT, GEORGIA

REPRESENTATIVES: John Foard, P. O. Box 374, Hewton, N. C. • H. B. "Beach" Askew, P. O. Box 424, Griffin, Ga. • L. O. Talley, P. O. Box 1169, Mexia, Texas
William S. Johnstone, P. O. Box 3218, Station A, Greenville, S. C. • William R. Fox, P. O. Box 388, Providence, R. I.

to prevent the generation of amine compounds (fishy odors) and reduces the incidence of free formaldehyde immediately after the curing process.

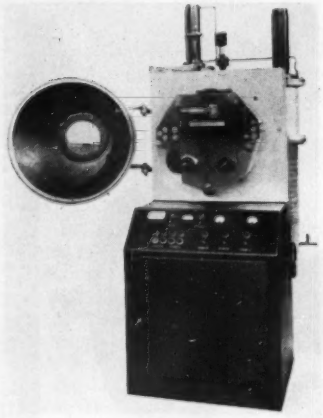
Textile Adjuncts Corp., Dept. 923, 876 Pacific St., Brooklyn 38, N. Y.

More data? Write ◀ or use card, p. 201; list K-105

For Faster Production of Metalized Textiles

Faster metallic coating of textile fabrics and other materials is possible with a new line of Stokes vacuum equipment for continuous roll metallizing.

The new units have only a single vacuum chamber and thus need only a single vacuum pumping system. This makes them more compact, taking up much less floor space, and

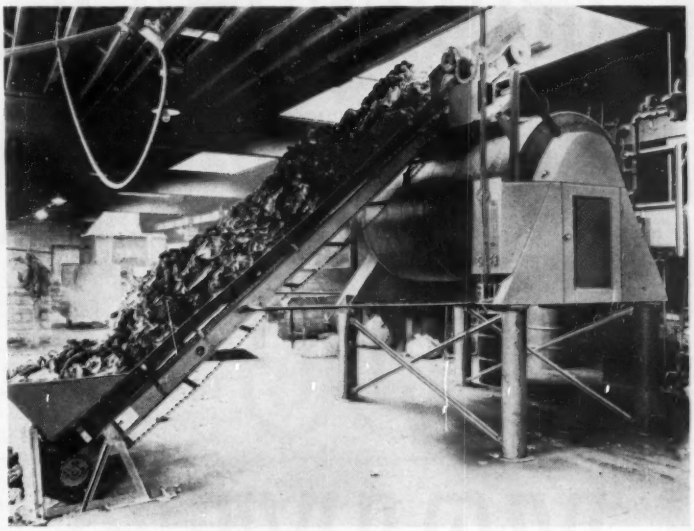


saves considerably on capital investment. The units can coat material in widths of 6 inches, 24 inches, 36 inches, 48 inches, 54 inches, or 60 inches, at speeds up to 500 feet per minute. Rolls up to 24 inches in diameter can be accommodated in the units, and material ranging in thickness from .0005 in. up to .0020 in. can be successfully coated on a continuous basis.

The metallizing units are designed to deposit a brilliant, uniform coating of metal over the entire width of the material with no dark or "burned" areas. They incorporate a device for continuously supplying the pure metal to be deposited. An observation-port set into the cover of the unit, plus a fluorescent light source placed behind the coated film, allows the operator to check the uniformity and quality of the coating continuously, during the deposition process, and to adjust the speed of travel of the material through the evaporation chamber so as to obtain the desired thickness of metal deposit. Air-actuated poppet valves, push-button controlled from the front panel, simplify the operation of the units.

F. J. Stokes Machine Co., 5509 Tabor Rd., Philadelphia 20, Pa.

More data? Write ◀ or use card, p. 201; list K-106



Proctor-Fairfield rag oiler, capacity 80 cu ft.

Get Longer Fiber From Waste with this Rag Oiler

When woolen and worsted rag wastes, knits, thread wastes, and wastes made of blended materials are treated in the Proctor-Fairfield rag oiler before processing through pickers or shredders, the delivered fiber will be found to have up to 50% better staple length than that produced by older methods.

The rags or waste to be processed are fed into the large drum (see accompanying illustration). Through the use of steam and mechanical action the oil, moisture, and heat are made to penetrate completely through the mass. The amount of oil and steam is carefully controlled, and the time of steaming is easily adjusted to suit different kinds of waste.

When steaming is completed, the treated materials are dropped out of the drum. They are then processed through pickers or shredders as rapidly as possible, preferably while hot, moist, and lubricated.

Capacity of drum is about 80 cu ft, so that from 300 to 450 lb of rags or waste may be treated in a single charge. Usual time cycle runs from 20 to 30 minutes per batch, so that two or three loads can be handled hourly.

Proctor & Schwartz, Inc., 7th St., and Tabor Rd., Philadelphia 20, Pa.

More data? Write ◀ or use card, p. 201; list K-107

Improve Tricot Knitting with this Selvage Guiding Device

A selvage guiding device recently developed for tricot knitting machines leads the selvages of the fabric from the knitting elements in a straightline path over the fabric take-up rolls.

It permits the establishing of a substantially uniform draw-off tension of the fabric across the whole machine and contributes to the equalization of the yarn tension over the whole tension bar. Also, curled selvages are eliminated when fabric is wound onto the take-up roll.

The device, which assists considerably in obtaining a more uniform

POWELL VALVES . . . THE COMPLETE QUALITY LINE . . . POWELL VALVES

POWELL LUBRICATED PLUG VALVES

FIG. 3059G—300-Pound Steel Flanged End Valve. Sizes 6" to 12".

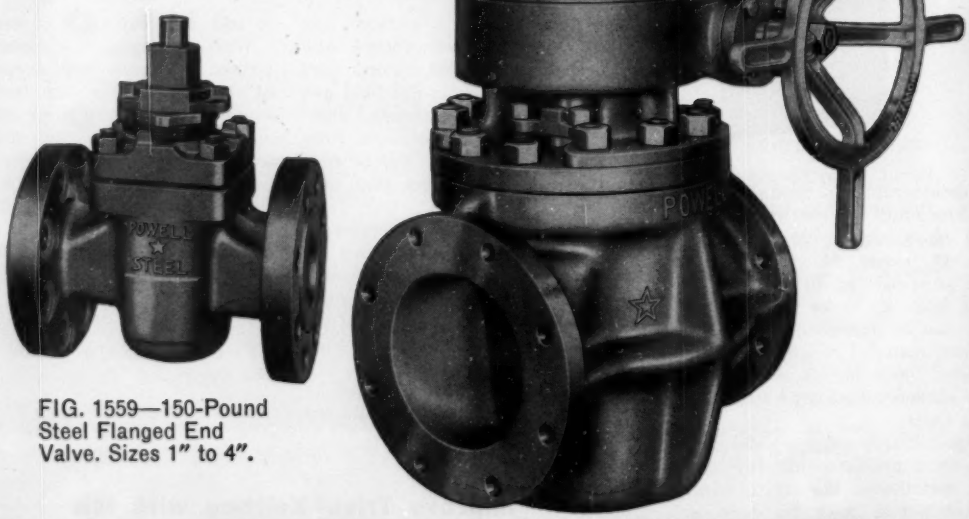


FIG. 1559—150-Pound Steel Flanged End Valve. Sizes 1" to 4".

POWELL VALVES . . . THE COMPLETE QUALITY LINE . . . POWELL VALVES

Powell Valves—the *complete* quality line—offer many outstanding features in these new Lubricated Plug Valves, such as quick and sure operation and a positive seal when the valve is closed.

Valves are available with screwed or flanged ends; single, screwed and bolted gland types, and in Semi-Steel, Carbon Steel, Bronze, Ni-Resist, Monel Metal, and Stainless Steel. Semi-Steel valves are rated 175 and 200 pounds W.O.G.; Steel valves, 150 and 300 pounds W.P. Sizes from 1" to 12". Valves in sizes 6" and larger can be furnished with gears for gear operation. Distributors located in principal cities. For descriptive literature—or help on valve problems—write direct to

The Wm. Powell Company, Cincinnati 22, Ohio.....109TH year

quality, may be adapted for use on any type of existing tricot machine.

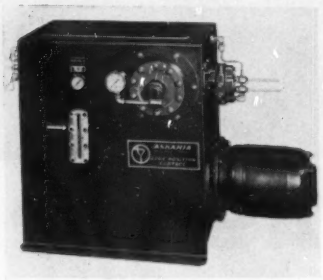
Alfred Hofmann & Co., 629-635 Fifty-Ninth St., West New York, N. J.

More data? Write ◆ or use card, p. 201; list K-108

Aid for High Speed Tentering

A new Twin Jet Regulator, two complete and independent hydraulic controllers in a single housing, is designed for high speed tentering, laminating or any other edge position control application where two edges are guided simultaneously.

This new unit is a larger, more powerful version of the Askania



double jet regulator. It incorporates the same jet pipe control systems, but also includes a 1 hp motor and a 7 gpm pump.

In high speed tentering applications this unit, when operating through a 2" bore cylinder, will position the tenter frame guide rails at a rate of three inches per second.

The pneumatic edge detecting system does not touch the web and uses extremely low pressure air. Yet it reacts immediately to any change in web position.

Askania Regulator Co., 240 East Ontario St., Chicago 11, Ill.

More data? Write ◆ or use card, p. 201; list K-109

Pink Acetate Dye

Eastone Fast Pink 3B-GLF dye for acetate possesses outstanding fastness to gas, light, sublimation, and washing. It also has exceptional fastness to perspiration and crocking and is unaffected by crease resistant resins.

The dye produces a bright bluish-pink on acetate, with slightly bluer shades on nylon. It is dischargeable and may be used for printing. It is unaffected by diazotizing and developing. Union and cross dyeing with blends or mixtures of acetate and cotton or viscose are possible since the new pink dye stains these latter fibers only slightly.

The dye has good exhaustion and level dyeing properties in a temperature range of 160 F to 190 F and may thus be used in either box or jig.

Eastman Chemical Products, Inc., Kingsport, Tenn.

More data? Write ◆ or use card, p. 201; list K-110

For Twisters: Ring and Oil Reservoir Made as One Piece

An improved oil type ring which features the ring and the oil reservoir made in one piece is available to mills twisting worsted, woolen, synthetic, and light cotton yarns.

The ring is held on top of the ring-rail with screws and washers. If there is excessive fly, it can be mounted on the round spacers so that the fly will be thrown off.

No oil wicks are used. Two opposite oil holes are covered by a small wool pad which does not protrude through the oil holes, making it impossible for the traveler to come in contact with the pads. An even amount of oil flow is obtained so that the traveler is lubricated at all times by the proper amount of oil.

The ring is oiled with a trigger type oil can. Molded oilproof rubber tips are furnished to put on the end of the oil can spout. Provision has been made on the ring cover plate so that the rubber tip can be lightly pressed in the pocket provided; one shot of

oil will fill the ring so that one oiling lasts longer.

The design of the ring is such that wear on the traveler is practically the same at all three of the traveler bearing points. Steel, bronze, or nylon travelers can be used. Sizes available at present are 2¾" x 7/16" and 2¼" x 7/16".

Ragan Ring Company, East Point, Ga.

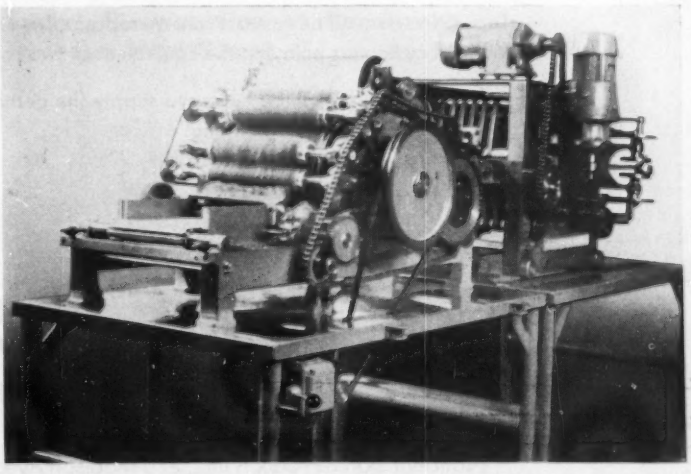
More data? Write ◆ or use card, p. 201; list K-111

12" Woolen Type Card for Processing Samples

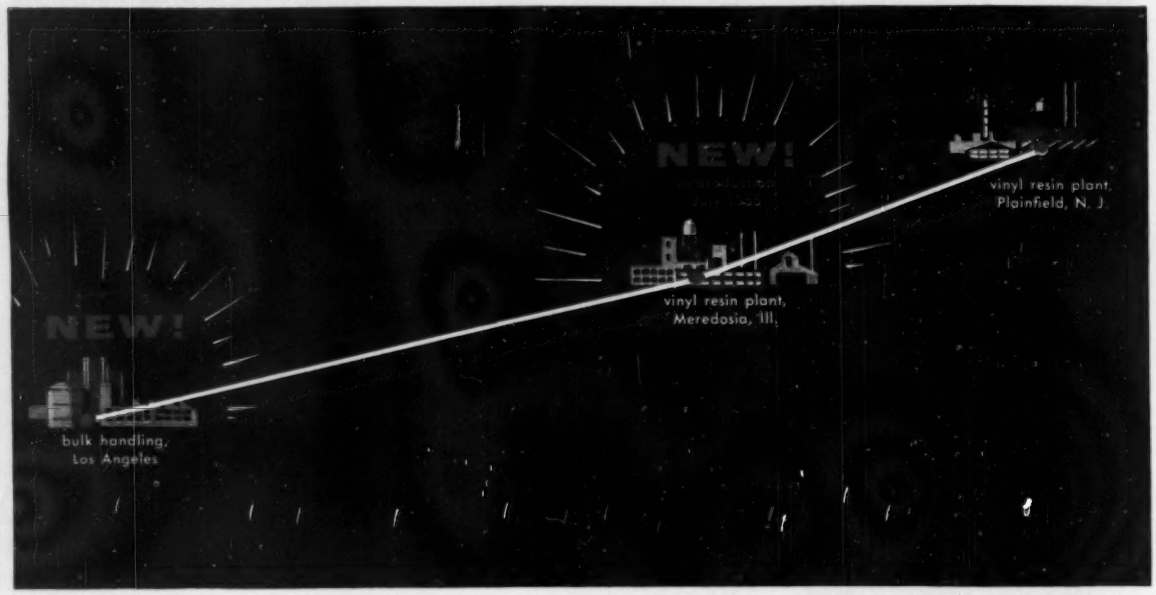
A sample woolen type card manufactured in Germany and recently made available through an agent in the United States is simple to operate, consisting of only two main parts: (1) the breaker card which provides a 12" working width, and (2) the two-bank tape condenser with a special drive and optimum width of tapes so that fine and coarse yarns can be produced.

A blend can be processed several

Table-size woolen type card for samples



News about National's Vinyl Solutions and Emulsions



STILL MORE!...FASTER!

For the third time in three years, National again is expanding its facilities for vinyl polymer and copolymer emulsions and solutions.

This time it's:

1—*increased capacity at Plainfield, N. J.*

2—*a second vinyl plant at Meredosia, Illinois.*

3—*bulk handling at Los Angeles.*

This means still more vinyls for the textile industry. And it reflects our growth in the fast expanding resin field.

Too, deliveries will be faster. From Meredosia, Los Angeles or Plainfield. With all customers enjoying the equivalent of two sources of supply.

Our resin chemists will be happy to supply the details. Just get in touch with your nearest National office.

TEXTILE DIVISION

National
STARCH PRODUCTS INC.

National Starch Products Inc., 270 Madison Ave., New York 16, N. Y.

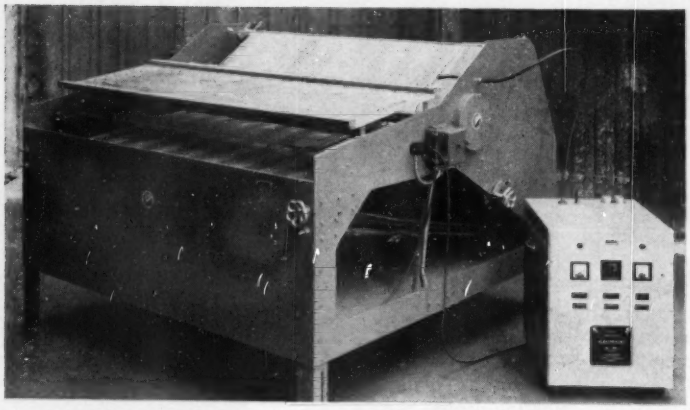
times on the breaker card before processing it on the tape condenser so that a thorough blending of different grades or shades of wool can be obtained.

The sample machine works on the same principle as a full-size wool carding set. The card itself consists of one cylinder, two feed rolls, one stripping roll, one breast roll, and two workers and two strippers. A device for grinding the workers, clearers, fancy, and doffer is attached to the machine.

Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

More data? Write ◂ or use card, p. 201; list K-112

Do Better Flocking with Less Effort by Electrostatic Method



A development of interest to mills doing flock printing (applying dots or figures composed of very short fibrous particles of wool, rayon, cotton, etc., known as flocks, to a fabric with some type of adhesive) is an electrostatic flock printing machine which produces a uniformly smooth pile surface that is fast to later processing and cleaning.

The principle of operation is as follows:

The tiny particles (flocks) are charged with a high voltage while the fabric to be flocked is grounded. The difference in potential between the flocks and the fabric is utilized to propel the flocks into the previously glued surface. During this process, the electric force aligns the individual flocks which enter the adhesive layer at right angles and are in that way attracted to the base material at one end of their short length. As the fibers are closely arranged and held firmly in the adhesive at one end, the resistance to rubbing is greatly improved.

Existing rotary printing machines can be converted to this method by using a recently developed electrostatic unit, four models of which are available. For flock printing fabrics up to about 6½ feet wide, the industrial model I-1,000 is offered.

Flocking speeds of 4 to 6 ypm are practical by this method; usually the controlling factor is the drying capacity.

Also available from this manufacturer are flock cutting machines and the necessary adhesives which are dyed to match the flocks with which they are to be used.

The AWR flock printing carriage is designed to produce velvet effect by the electrostatic process. It is a compactly designed unit and operates on the same principle as a conventional screen printing machine, being an addition to an ordinary silk screen table. This particular carriage is built to any working width. The flocking unit runs the length of the screen printing table on rails at either side. After the adhesive has been screen printed on the cloth, the unit is moved by hand along the table, applying the flock to the prepared areas.

Arno H. Wirth, Am Heilbrunnen, Reutlingen, Germany.

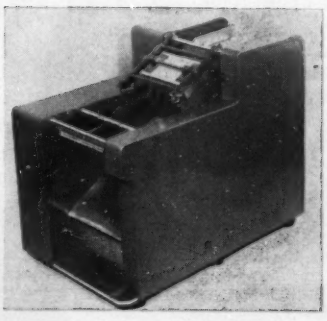
More data? Write ◂ or use card, p. 201; list K-113

Machine Speeds Preparation of Specimens for Nep Count

Now commercially available is the nep machine designed by the United States Department of Agriculture and described in TI for April, 1954, pages 180-181.

To provide a rapid and satisfactory method of preparing specimens of raw cotton for nep evaluation, this laboratory-type machine produces a relatively narrow web of fibers from a small sample of cotton.

The design of this machine incorporates the principal mechanical assemblies of textile carding machines in order to simulate commercial production methods as closely as possible.



To prepare nep specimens

The machine will process a 3-gram sample of blended cotton to produce a continuous web 4 inches wide and approximately equivalent in appearance and weight to card web produced for 40-grain sliver. Sufficient web is produced to provide 10 specimens which are placed on 4 x 9 inch boards for nep evaluation.

Custom Scientific Instruments, Inc., Kearny, N. J.

More data? Write ◂ or use card, p. 201; list K-114

at no extra cost to you . . .

NEW Quality Features on All AIR and HYDRAULIC CYLINDERS

CASE HARDENED CHROME PLATED PISTON RODS

On all Miller Air and Hydraulic Cylinders

Benefits To You

CASE-HARDENED Piston Rods (52-54 Rockwell "C") provide practically complete protection against damage from hammer blows, wrench-dropping, mishandling, and similar occurrences.

The HARD CHROME PLATING over the case-hardened rods protects against scratch-damage and rust.

"TEFLON" WIPERS

On all Miller Air and Hydraulic Cylinders

"TEFLON" HYDRAULIC ROD SEALS

On all Miller Hydraulic Cylinders only

Benefits To You

"TEFLON" Rod Wipers and "TEFLON" Hydraulic Seals withstand temperatures from —100° F. up to 500° F. They are impervious to practically all known chemicals, including the fire-resistant, special, and standard hydraulic fluids in current use.

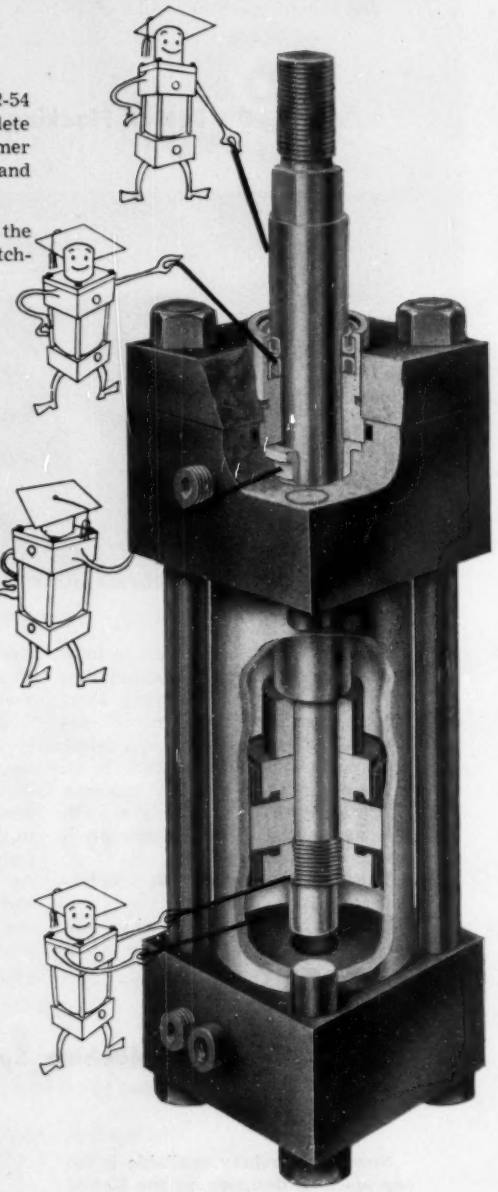
RUST RESISTANT SURFACES

On all Miller Air and Hydraulic Cylinders

Benefits To You

Highest quality Black Ferric Oxide Finish provides rust protection in air cylinder operation and on all cylinders during shipping and installation.

Cylinder heads, caps, mountings, pistons, followers, and the unplated portions of the piston rods have this finish. It is not recommended for water service.



WRITE FOR CYLINDER BULLETINS H-104 and A-105

Complete Miller cylinder line includes: air cylinders, 1½" to 20" bores, 200 PSI operation; low pressure hydraulic cylinders, 1½" to 6" bores for 500 PSI operation, 8" to 14" bores for 250 PSI; high pressure hydraulic cylinders, 1½" to 12" bores, 2000-3000 PSI operation. All mounting styles available.

Over 8,000 Different Cylinder Selections Available for Immediate Delivery. Write for Complete List.

EFFECTIVE DATES

These new Miller features will be provided at no extra cost after January 1, 1956—and at Miller's option prior to that date.

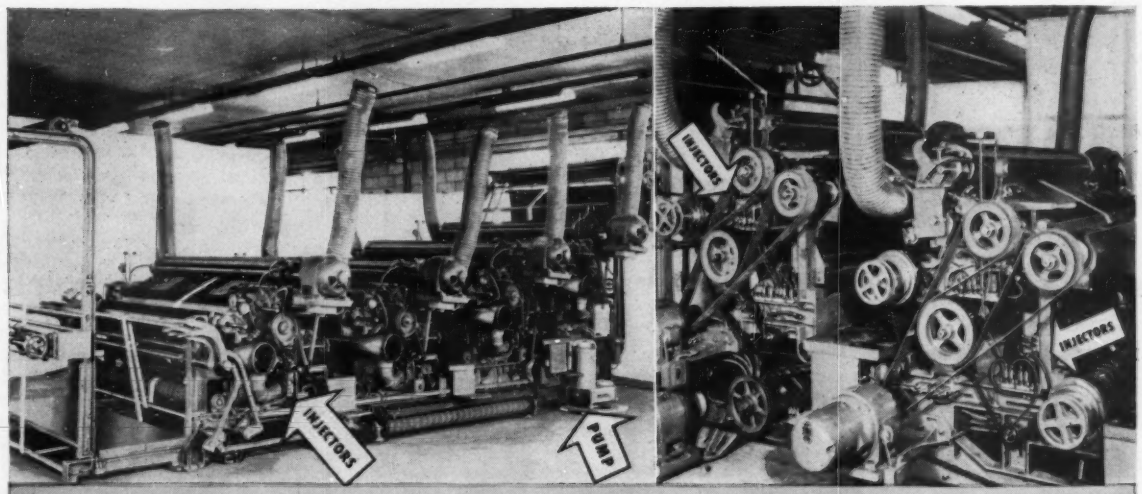
SALES AND SERVICE FROM COAST TO COAST

EVELAND • YOUNGSTOWN • DAYTON • TOLEDO • CINCINNATI • COLUMBUS
TSBURGH • PHILADELPHIA • BOSTON • HARTFORD • NEW YORK CITY
FFALO • ROCHESTER • MINNEAPOLIS • GRAND RAPIDS • DETROIT • FLINT
RT WAYNE • SOUTH BEND • INDIANAPOLIS • MILWAUKEE • LOUISVILLE
NSAS CITY • SEATTLE • LOS ANGELES • SAN FRANCISCO • BALTIMORE
NVER • ST. LOUIS • MOLINE • CHICAGO • HOUSTON • ATLANTA
RONTO, CANADA and OTHER AREAS

MILLER FLUID POWER CO.

2042 N. Hawthorne Ave. Melrose Park, Ill.

AIR & HYDRAULIC CYLINDERS • BOOSTERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS



Here's How A Georgia Woolen Mill*

SAVES 2 HOURS DOWN-TIME EACH DAY

ON A 4-BLADE SHEAR

by installing a

Lincoln Centralized LUBRICATION SYSTEM

Hand lubricating this big shear was a two-hour job every day . . . during which time the machine stood idle. Even with this time consuming method many hard-to-reach bearings were overlooked, resulting in costly bearing failure and breakdowns. Grease dripping on the floor was a constant fire and accident hazard.

Now, with an automatically controlled Lincoln Centralized System, all 213 bearings are lubricated accurately and simultaneously every four hours. Downtime has been sharply reduced, bearing failures eliminated and power consumption cut.

Lincoln | **THE MOST TRUSTWORTHY NAME IN LUBRICATING EQUIPMENT**

SEND TODAY for your FREE copy of Catalog 80, showing the complete range of Lincoln Lubricating systems. Experienced Lincoln engineers will gladly work with you in planning the best System for your needs.

GET THE MOST FROM YOUR PRESENT EQUIPMENT...

with the added economy and efficiency of a Lincoln Controlled Lubricant Application System to apply...

THE RIGHT LUBRICANT IN THE RIGHT QUANTITY AT THE RIGHT TIME... automatically

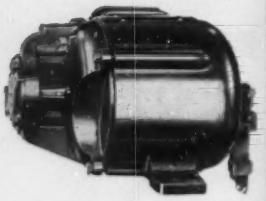
*Name on request

LINCOLN ENGINEERING COMPANY • 5702-15 Natural Bridge Ave., St. Louis 20, Missouri

MOTORS

number seven of a series depicting

MORE AND BETTER TEXTILE PRODUCTION WITH HYATTS



(Above.) Diehl Power Transmitter Loom Motor with two Hyatt Roller Bearings to facilitate lateral movement of drive shaft when clutch is engaged or disengaged.

(Above, right.) A typical group of Diehl "DIT" Lint-free Motors, with Hyatts at the shaft extensions, operating spinning frames at the Greenwood Mills, Greenwood, S. C.

Supplying power to textile machinery is a punishing job, often involving long hours of uninterrupted service under adverse conditions. *Gear tooth pressure*, as in loom drives, or *belt pull*, as in spinning frame or twister frame drives, puts unusually heavy loads on motor shaft extensions.

That's why leading makers of textile motors standardize on rugged Hyatt Roller Bearings on the shaft extension end, where radial loads are too heavy for ball bearings. Hyatts assure long life, dependability and freedom from costly down-time—more reasons why you're always sure of *more and better textile production with Hyatts!* For further details on the profitable application of Hyatt Roller Bearings to textile machinery, request Bulletin T-54 from Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

STRAIGHT BARREL TAPER

Aids for Testing in the Mill

Now available for quality control testing in textile mills are the following new items:

(1) The Standard hand-operated, 36" roving reel—sturdily constructed, equipped with yardage counter that is visible at all times, has adjustable creel for any size bobbin.

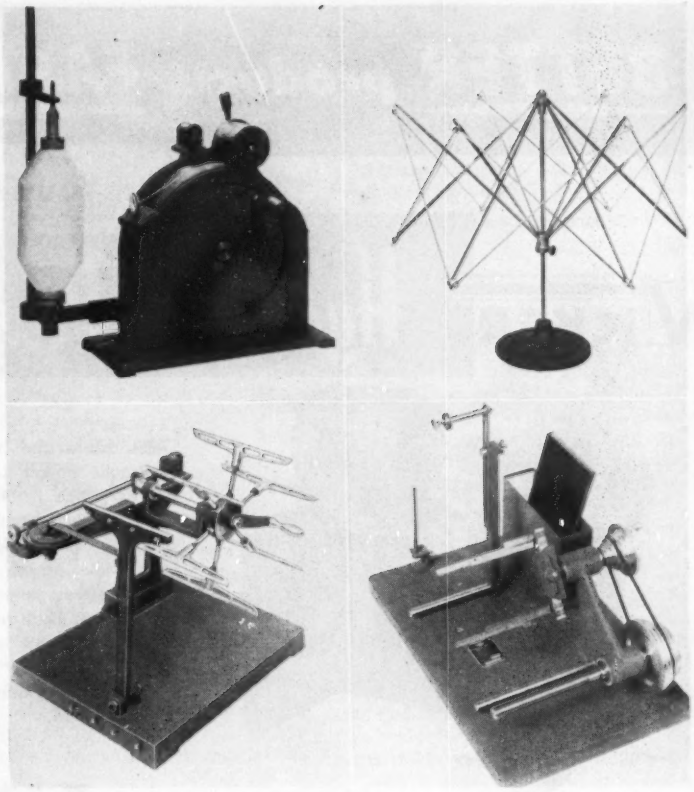
(2) The Standard umbrella reel for winding and examining yarns in skein form — holds skeins up to 72" long.

(3) Standard 36" or 54" yarn reel —hand-operated, equipped with direct-reading 3-digit counter, rugged construction, adjustable traverse, produces four skeins at a time.

(4) Standard yarn evenness controller — hand-operated yarn examining machine with five speeds available to control yarn spacing on blackboards; has adjustable tension stand and supply attachment for bobbins and cones.

Scott Testers (Southern), Inc., Box 834, Spartanburg, S. C.

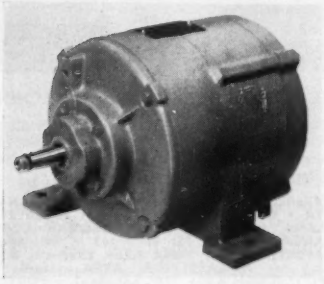
More data? Write ◆ or use card, p. 201; list K-115



(Upper left) Standard 36" roving reel; (upper right) umbrella reel; (lower left) yarn reel; (lower right) yarn evenness controller.

Clutch-Brake Motor Stops Looms Quickly

A new, conventionally designed clutch-brake loom motor which helps provide constant picking speed, fast and more accurate braking, reduced speed fluctuation, and low maintenance costs has been announced.



The new motor has the same high efficiency, power factor, and high torques as the standard G-E loom motor. In addition, it features a new principle to achieve the improved braking.

The rotor is pressed onto the heavy flywheel which provides the inertia for smooth loom operation. When a warp thread breaks, a clutch automatically disengages from the flywheel and rotor, thus removing inertia, and the brake brings the loom to a quick stop.

Insulation of the clutch-brake motor is of polyester film, which has high dielectric properties. These properties minimize the possibility of burn-outs. The film is also non-hygroscopic to resist moisture and high humidity, and is substantially stronger than ordinary motor insulation.

To give added protection against moisture damage, the entire motor stator assembly is coated with "Dri-Film" silicone which sheds water. This special treatment helps eliminate insulation failure due to moisture and high humidity. Leads are coated with neoprene insulation which won't "wick" moisture into vital electrical parts.

General Electric Co., Small Integral Motor Dept., Fort Wayne, Ind.

More data? Write ◆ or use card, p. 201; list K-116

Cuff and Flap Machine; Automatic Pressing

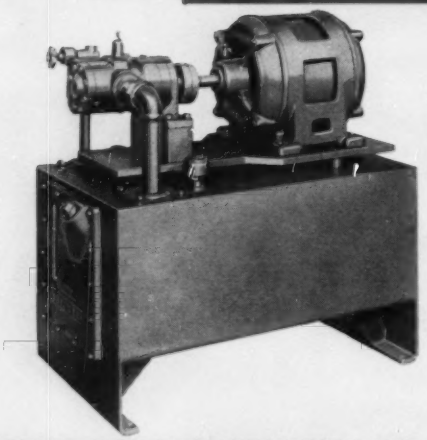
A new speedster dual full cuff and flap forming and pressing machine forms and presses cuffs and flaps of all types and sizes used on men's, boys' and ladies' shirts, jackets, and other items of wearing apparel. Its automatic pressing operation increases production while at the same time offering extra safety for the operator.

A continuous loading cycle releases the cuff or flap from the die after pressing and holds the die at the halfway position between loading and pressing positions of die blade and carriage while the operator inserts the second cuff on alternate side. By stopping at the halfway position on the way down, the operator has greater freedom of movement for loading the alternate die blade and is protected from the complete downward thrust of the die blade and carriage. When second cuff is moved into die, the first cuff and carriage then drops from halfway position to

BETTER products FASTER

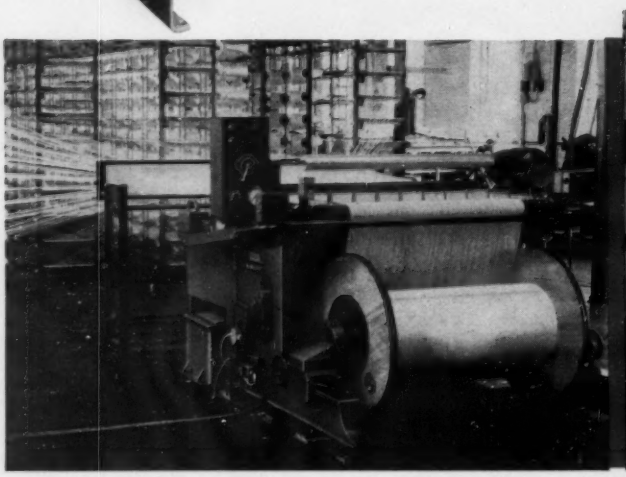
When Your Textile Machinery has

VICKERS Hydraulic Power Units



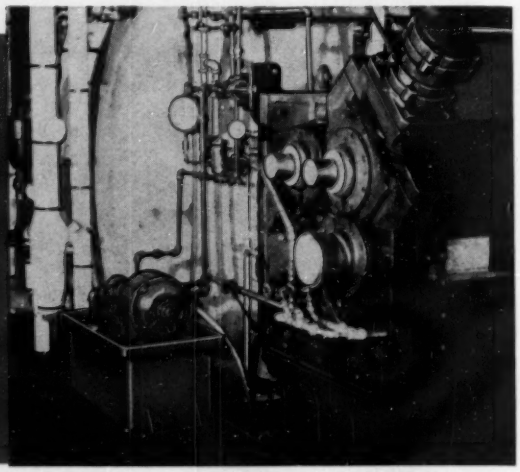
Dependable and practically maintenance-free, Vickers Hydraulic Power Units are a compact self-contained power source for hydraulic systems on a wide variety of textile machinery. They frequently simplify design and save installation costs. Many are standard stock units while others are individually designed for the machines they serve.

Vickers Hydraulics has numerous additional advantages for the user and the builder of textile machinery. Note applications below and then ask our nearest Application Engineering Office for a copy of Textile Bulletin 54-66.



WARPING UNIT

Delivers larger warps of uniform density. Stepless control of beam against press roll prevents scuffing. Vickers Hydraulic System is completely adjustable to meet all conditions. Accommodates beam heads up to 40" diameter.



HIGH TEMPERATURE CONTINUOUS DYEING MACHINE

Provides faster continuous dyeing by dye bath at temperature above atmospheric boiling point in pressure vessel. Cloth passes in and out between rolls that form pressure seal. Nip pressure between rolls is provided and held uniform by Vickers Hydraulics.

FOR FURTHER INFORMATION *Ask For* BULLETIN 54-66

VICKERS Incorporated

DIVISION OF SPERRY RAND CORPORATION
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IN CANADA: Vickers-Sperry of Canada, Ltd., Toronto

Engineers and Builders of Hydraulic Equipment Since 1921

loading position. The alternate die blade and carriage follows the same cycle.

The machine thus forms and presses a complete cuff or flap on one side of die while the operator is loading second cuff on other die blade carriage. Time is saved and production increased since there is always one die blade and carriage at the loading position.

The machine also offers these advantages:

(1) Forms and presses cuffs and flaps of all sizes. Die blades adjustable throughout the normal range of shirt cuffs enable the operator to press various size cuffs without changing die blades.

(2) Easy adjustment of die blades and pressure. Blades are adjusted by simply turning the knurled adjusting screw to the desired cuff length.

(3) Standard features include pressure adjustment of the die shoes, automatic interval timer and thermostat control.

(4) Optional automatic pressing shoe device.

American Safety Table Co., 224 Fifth Ave., New York, N. Y.

More data? Write or use card, p. 201; list K-117

Equipment Briefs

New apparatus providing water saving in industrial cooling and giving close control of temperatures (within 2 F) is named the Panel Casing Aero **Heat Exchanger.** It cools by evaporation and obtains the temperature control by modulating the use of outside air. Used for cooling chemical reactions, evaporating, distilling, and condensing; also is adapted to cooling compressed air and gases.

Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y.

More data? Write or use card, p. 201; list K-118

A listening device, called the **Engineer's Sound Detector,** makes it possible to detect the smallest internal defects in moving machinery without shutting down or otherwise taking the equipment out of service. Allows user to accurately locate broken, loose, worn or bent parts in reciprocating engines, motors, gear boxes, compressors, pumps, and similar equipment, regardless of size. Also useful in determining efficiency of steam traps and locating air leaks or liquid leaks in underground piping.

Burke & Co., Worton, Maryland.

More data? Write or use card, p. 201; list K-119

"Devcon," a combination of 80% steel and 20% plastic, is being used for filling holes in castings, bonding steel to itself or to aluminum, bronze, brass, iron and porcelain; rebuilding broken machinery; for building up the inside of pumps, valves, etc. As easy to handle as modeling clay, the product does not require application of heat or pressure — two hours after the addition of a special hardening agent, the mixture becomes a rigid, tough, strong, steel-like mass. Two types available — Devcon A is a putty that can be applied to a vertical surface and will not run or sag; Devcon B is a viscous liquid that can be poured.

Chemical Development Corp., Danvers, Mass.

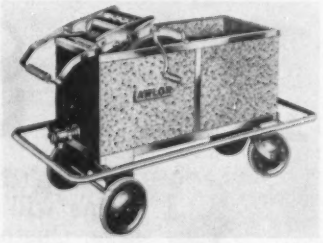
More data? Write or use card, p. 201; list K-120

Specially designed for small and often difficult work is the new Model LTX **Power Bench Type Punch Press** for slotting, cutting, pinking, scoring, marking, embossing, perforating, creasing, punching, etc., material such as leather, plastics, textiles, paper, fiber, metal, etc. It will mass produce with a capacity up to 250 operations per minute of continuous operation.

Alva Allen Industries, Punch Press Dept., Clinton, Mo.

More data? Write or use card, p. 201; list K-121

An **improved mopping tank** for use in floor maintenance is the Lawlor Low-Boy, a two-compartment unit that has all the good features of other



models, and for added convenience, comfort, and ease of operation, it is 10" to 12" lower than others. Eliminates damage to fixtures from swinging mops in low ceiling areas. Hand-pressure type wringer, which is adjustable for all mop weights, can be installed on either end of tanks. Foot pressure wringer available at extra cost. Two sizes are manufactured — 30-gallon and 60-gallon.

S. C. Lawlor & Co., 124 N. Aberdeen St., Chicago 7, Ill.

More data? Write or use card, p. 201; list K-122

A ready-to-use **Photoelectric Control System** operates over distances up to 100 feet and affords speeds up to 600 operations per minute. Called Set P4L, its applications include: Materials handling control over long distances; use with mirrors to provide "curtain of light" protection of large work spaces; operation of wide factory doors; and invisible beam systems for intrusion alarms. The device has been applied as a safeguard on padders and washers in wet processing plants; also as an end break detector on pin drafting machines used in worsted yarn manufacture.

Electronics Corporation of America, Photoswitch Div., 77 Broadway, Cambridge 42, Mass.

More data? Write or use card, p. 201; list K-123

Draftless air conditioning, heating, and ventilating in offices, laboratories, and manufacturing areas can be obtained by using the "Modular" **Multi-Vent Air Diffuser,** a device which is completely sealed from view and employs a perforated ceiling panel to introduce air vertically and at low velocity into the room or working area. Particularly useful where a high number of air changes is required.

Multi-Vent Div., Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.

More data? Write or use card, p. 201; list K-124

A new development for industrial water control projects is the "HY-Q" **Flush Bottom Closure Sluice Gate** which allows more flow yet insures closure against flow in either direction. Some advantages offered by it are: less turbulence at the bottom where head is greatest, so smoother flow is possible; no barrier or trough to accumulate silt and trash; better closure assured; drainage of the outflowing channel or chamber is complete; head developed by additional

I'm Paul Logue. I head up a department of specialists here at WICA in Charlotte to set you up with WICA resins.

thermo-

Now we're manufacturing our own thermo-setting and thermo-plastic resins—right here in the South. We're turning out a dynamic series of resins varying from one extreme to the other in hand, durability and thermal behavior.

setting

We're proud of what's coming out of this plant, and you will be, too. We are meeting head-on the changing trends in new fibers, creating the tools that will help you chalk up new developments in a tight industry.

resins

Don't have to tell you what our WICA resins will do to boost the value of your tags. Customer faith in those tags is like money in the bank. Wica Chemicals, Inc., Old Concord Road, Charlotte, N. C.

by WICA

effective depth of water is an important factor in controlling flow.

Rodney Hunt Machine Co., Orange, Mass.

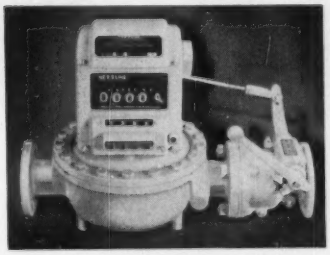
More data? Write or use card, p. 201; list K-125

Available in grades to meet every steel-wooling need in connection with floor care — refinishing, dry cleaning between refinishings, etc. — is the **Finnell Welded Steel-Wool Pad.** Its construction prevents shredding and bunching and allows the pad to wear evenly. Also, with uniform contact assured, the welded pad does a finer job faster. Pad is self-adjusting and can be used on any fiber brush with any disc-type machine.

Finnell System, Inc., 1300 East St., Elkhart, Ind.

More data? Write or use card, p. 201; list K-126

Automatic deliveries of water, syrups, oils, solvents, and other liquids to batching and blending processes are accomplished with accurate cut-off and minimum hydraulic hammer even when handling high rates of flow when two new **Auto-Stop Meters with double trip Auto-Stop Valves** are utilized. Quantity desired is set by pushing buttons, and



the meter shuts off the flow automatically when the exact quantity is delivered by the valve.

Neptune Meter Co., 19 West 50th St., New York, N. Y.

More data? Write or use card, p. 201; list K-127

Recommended for use in dirty, dusty, fume, and mist-laden atmospheres that could damage the ordinary open motor are the new 1 to 5 hp Century **Totally Enclosed Fan Cooled Motors.** In addition to meeting all NEMA requirements, the motors feature a practically indestructible aluminum rotor, ventilated fan designed to provide same efficient operation in either direction without having to change fan, "six layer insulation" for the stator windings, and mechanical modifications that provide availability of brackets for bolting the motor to the machine or the machine to motor.

Century Electric Co., 1806 Pine St., St. Louis, Mo.

More data? Write or use card, p. 201; list K-128

Development of a new **synthetic resin flocculating agent** for use in disposal or recovery operations involving clarification, sedimentation, or filtration has been announced. Called Good-rite K-720, the material serves to collect small solid particles into larger clusters. The formation of the clusters or floc facilitates separation of the dispersed solids from the liquid. The agent improves the degree and rate of sedimentation and at the same time improves the filtration rate characteristics of dispersed solids.

B. F. Goodrich Chemical Co., 324 Rose Bldg., Cleveland 15, Ohio.

More data? Write or use card, p. 201; list K-129

A new **wire-rope type of electric hoist** available in capacities of 250, 500, 1000, and 2000 pounds, features: (1) two brakes — a motor brake and a load brake, either of which will hold the full load; (2) full 10-foot lift as standard, with 14, 18, and 20-foot lifts as optional equipment; (3) positive-acting upper-limit switch; (4) motor built specifically for hoisting service with high starting torque and frequent reversing characteristics, rating it 15 minutes under full load.

P & H Hoist Division, Harnischfeger Corp., Milwaukee 46, Wis.

More data? Write or use card, p. 201; list K-130

A new **automatic control system for dual tank zeolite water softeners** is part of a completely pre-engineered zeolite softening unit including electrical control panel, flow meter, automatic multi-port valve, zeolite softeners, brine measuring tanks, and connecting lines. Electrical control panel contains series of relays and a multiple-cam timer which initiate periodic, timed regeneration of the softeners.

Graver Water Conditioning Co., 216 W. 14th St., New York, N. Y.

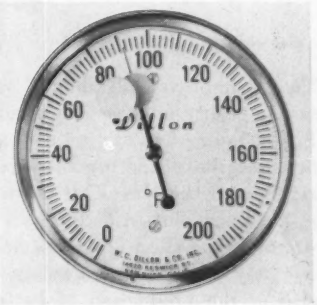
More data? Write or use card, p. 201; list K-131

A new **program for evaluating employees,** "The Performance Record," is based on what employees do rather than on subjective supervisory opinions. "Critical incident" method is utilized. Supervisors look for significant actions — actions that result in success or failure of the employee on a part of his job. The specific facts gathered and recorded serve as a basis for fair and objective evaluations of each employee's performance and for two-way communication during employee-supervisor conferences. Supervisors can use information to guide each employee in developing his full potentialities. Also, recorded facts are helpful to management in selecting employees for merit raises, promotion, transfer, or dismissal.

Science Research Associates, 57 W. Grand Ave., Chicago 10, Ill.

More data? Write or use card, p. 201; list K-132

For those places where height or distance make it impractical to read the actual temperature and where it is important only to know that it is off norm, the Dillon **Signal Eye Thermometer** is recommended. Here is how it works: A bright red disc is affixed to the pointer and an opaque disc of the same diameter is

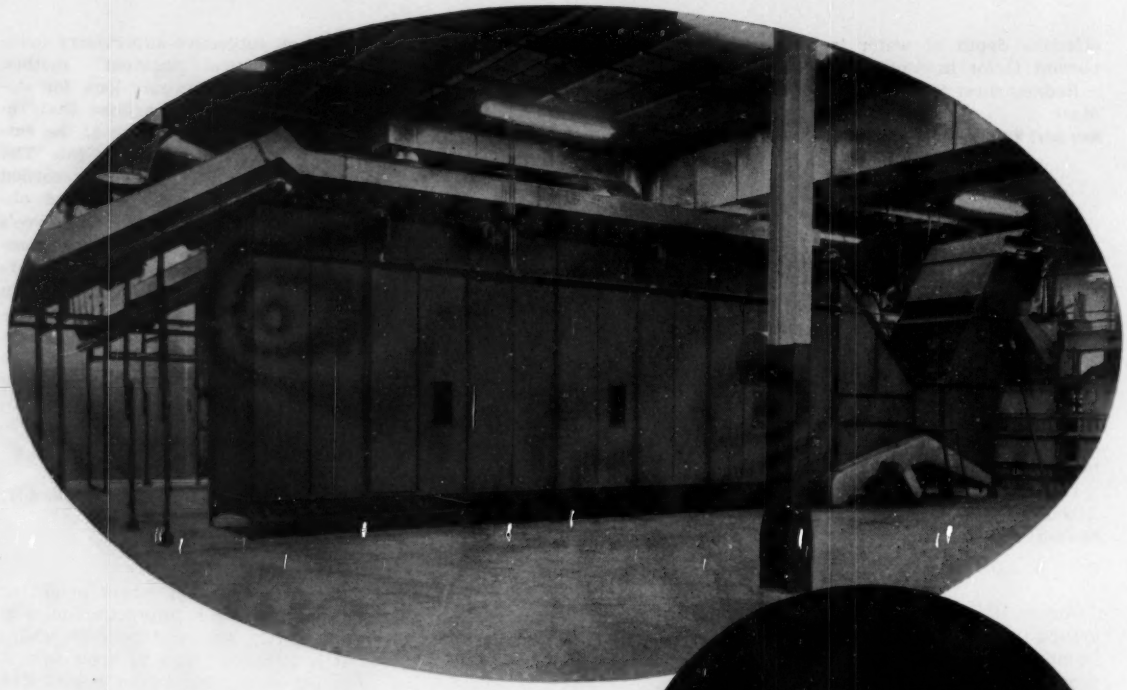


attached to the dial glass over the spot where it exactly coincides with the red disc. Slightest temperature variation causes pointer to fluctuate above or below the opaque circle, thus revealing the red signal eye to the observer. The opaque disc can be quickly repositioned by the operator should a new standard operating temperature be selected.

W. C. Dillon & Co., Inc., P. O. Box 3008, Van Nuys, Calif.

More data? Write or use card, p. 201; list K-133

Designed for handling all bulk materials is the **Napco Loader,** Model NL-50, 15 cu ft, front end loader which has front wheel drive and rear wheel steering. Short turning radius,



Today's accurate, uniform blends

MAKE MORE PROFITS

because of Proctor & Schwartz developments

Today, improved blending of wool or synthetics is a cost-saving reality in close to a hundred Proctor-equipped mills. For example, the Proctor "Roller Distributor", shown above, first distributes the precision-weighed stock, builds it up in layers, and then breaks it down evenly—keeping variations in fiber distribution as low as 1 to 1½%! Regardless of the size of your mill, a Proctor & Schwartz blending system will not only pay for itself quickly in direct labor savings, but also in the production of better yarns at greater profits.

Blending is just one of the many fiber processing operations of every conceivable type which have been pioneered by Proctor & Schwartz—world's largest and most experienced producer of blending machinery. And, as always, every piece of Proctor blending equipment, from the smallest pilot unit to the largest system, comes to you with the assurance of quality performance—*as guaranteed.*

RECENT REPRINTS OF INTEREST IN THE TEXTILE FIELD

Write for your copy of Mr. John H. Senior's recent talk delivered at the Lowell Technical Institute entitled: "Mechanical Blending In a Woolen Mill".

PROCTOR & SCHWARTZ EQUIPMENT FOR THE TEXTILE FIELD

- Automatic Blending Systems
- Weighing Feeds
- Pickers
- Shredders
- Bale Breakers
- Synthetic Cards
- Garnetts
- Dryers For Fibrous Material
- Yarn Dryers
- Hot Air Slasher Dryers
- Cloth Carbonizers
- Roller Dryers and Curers
- Loop Agers for Print Goods
- Tenter Housings
- Open-Width Bleach Systems for Woven Fabrics
- Multipass Airlay Dryers
- Nylon Setting Equipment
- Con-O-Matic Washers
- Continuous Bleach Systems for Producing Tubular Knits
- Equipment for "REPMANIZED"* Shrunk-To-Fit Fabrics
- Carpet Dryers

*Reg. U.S. Pat. Off.

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PROCTOR & SCHWARTZ, INC.

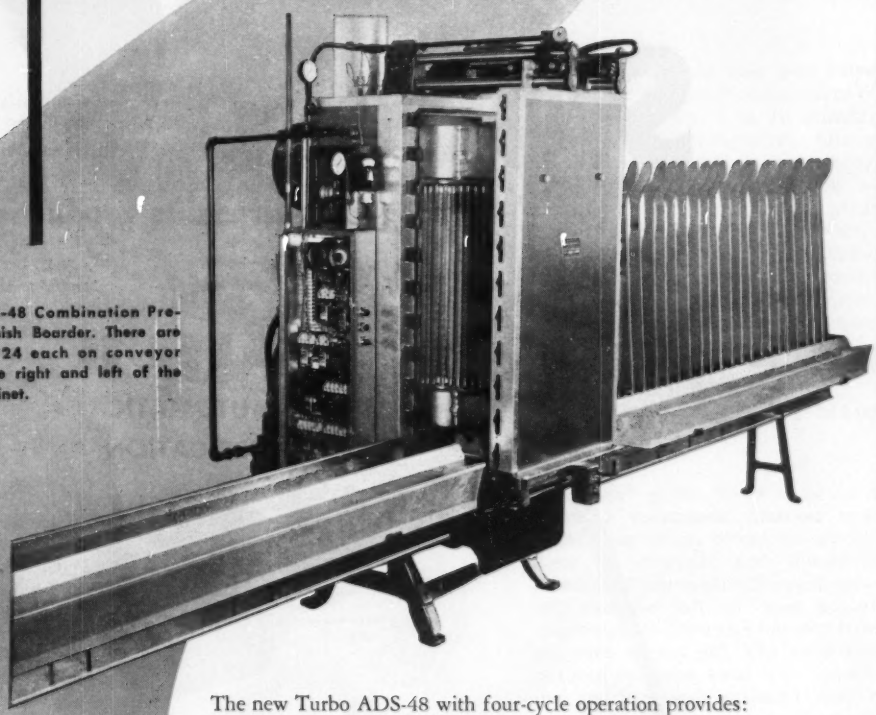
Manufacturers of Textile Machinery and Industrial Drying Equipment

Philadelphia 20, Pa.

NOW...

SEAMLESS DUNN SYSTEM FINISHING FOUR-CYCLE OPERATION

for complete control of finishing according to the after-dyeing method of plasticizing all types of hosiery or garments, stretch or conventional



Turbo ADS-48 Combination Preboarder/Finish Boarder. There are 48 forms, 24 each on conveyor belts to the right and left of the setting cabinet.

The new Turbo ADS-48 with four-cycle operation provides:

(1) timed preheating and preconditioning boards and fabrics to uniform temperatures and dryness for the control of excessive condensation.

(2) timed solenoid-controlled air expulsion allowing for top preboarding temperatures to be reached quickly at saturated steam table pressures, further reducing condensation. The higher pressures necessary for an air and steam mixture are avoided.

(3) timed temperature controlled steaming cycle can be shortened considerably, further checking excessive condensation.

(4) timed air drying cycle can be shortened because of minimum condensation. The cabinet is lined with finned heating coils. For still more efficient drying, a recirculating air preheating stack is optional equipment.

These new features for the control of temperature and condensation reduce bleeding and splotching due to hot water collecting on the boards . . . reduce steam consumption, reduce processing time . . . cut your finishing costs. Write for the ADS-48 story today.

TURBO SINCE 1929

TURBO MACHINE COMPANY

LANSDALE, PENNA., U.S.A.

Southern Representative: F. W. Warrington Co., Charlotte, N. C.

"Builders of Precision Machines for a Quarter Century"

Stop hand oiling start increasing production with BIJUR AUTOMATIC LUBRICATION

Hand lubrication of textile machinery is obsolete. Leading textile mills, following the trend toward greater automation, have switched to automatic lubrication.

Bijur Automatic Lubrication makes costly, laborious, hand oiling a thing of the past. It insures more production from every machine by doing away with the major cause of textile machinery breakdowns—faulty lubrication. And still more productive time is added by eliminating down-time for hand oiling. Every bearing, even the most inaccessible, is fed the right quantity of oil at the right time.

Savings in oil consumption can exceed 50%. Work spoilage is avoided. Danger of fire is reduced and causes of accidents are removed. When you eliminate outmoded methods of lubrication, you will see immediate results in dollars-and-cents. 1032

Colorful, new bulletin, "From Fibre to Fabric," shows the practical benefit that Bijur Automatic Lubrication offers to the Textile Industry. Write for your copy.

BIJUR LUBRICATING CORPORATION
Rochelle Park, New Jersey

Pioneers in Automatic Lubrication

0-7

low center of gravity, and good balance give this loader extremely high maneuverability for swinging through box car doors and in and out of tight spots. Can dump into hoppers and high truck boxes. 35-degree bucket tilt-back at ground level allows bucket to get full load quickly and easily as it is crowded forward and upward into the stockpile.

Napco Construction Equipment, a division of Napco Industries, Inc., 834 N. 7th St., Minneapolis, Minn.

More data? Write ◆ or use card, p. 201; list K-134

Casters with four-position swivel locks in 4", 5", 6", and 8" sizes permit the positive locking of the caster fork in any one of four positions (90° apart) whenever the normal swiveling action of the caster must be prevented. These "23" series Lockweld steel double ball race swivel casters are available with vulcanized rubber tired, semi-steel or molded plastic wheels in all sizes and with solid rubber wheels through the 6" size.

The Fairbanks Co., 393 Lafayette St., New York 3, N. Y.

More data? Write ◆ or use card, p. 201; list K-135

A **high lift pallet or nesting fork truck,** designated Model KHTP, is available in capacities of 2,000, 3,000, and 4,000 lb. Has lifts up to 130" and is highly maneuverable in crowded quarters. For longer service with less battery power, the new model has roller type masts and low pressure hydraulic system. The lower amperage draw will give longer battery life as well as ample power for a full day's work.

Lift Trucks, Inc., Cincinnati 14, Ohio.

More data? Write ◆ or use card, p. 201; list K-136

A new **home study course in industrial safety engineering** is designed to help industrial supervisors in charge of safety, industrial engineers who desire safety training, safety representatives of labor departments, and those whose responsibilities would call for a knowledge of safety practices in industry.

International Correspondence Schools, Scranton, Pa.

More data? Write ◆ or use card, p. 201; list K-137

The new No. 23 **drain or sampling valve** is completely self-draining, for the valve stem seats on the outside of the valve body. Ideal for installations where it is desirable to have the valve seat inside the wall of a vessel in order to prevent liquid from remaining in the nipple and valve.

Jerguson Gage & Valve Co., 80 Fellsway, Somerville 45, Mass.

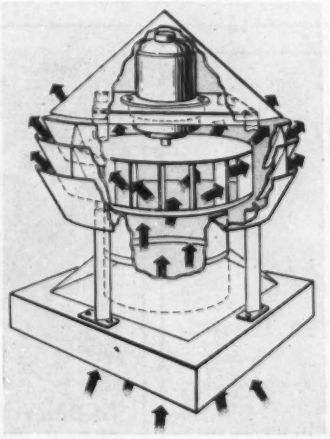
More data? Write ◆ or use card, p. 201; list K-138

A new **coating for windows,** called Infropake, is highly transparent, improves visibility, and performs the following functions: cuts down on fading of fabrics by elimination of 99% of ultraviolet light; reduces radiant heat by absorbing infrared light; efficiency of air conditioning systems is increased; absorbs glare; and cuts down reflections. Efficiency of employees is improved because of greater eye comfort.

Infropake Corp. of America, Whitestone, L.I., N. Y.

More data? Write ◆ or use card, p. 201; list K-139

Designed for roof application is the new Proctor **Power Exhauster.** Exhaust air is blown up and away from the roof, minimizing harmful effects



of fumes on roof surfaces. Maintenance costs are low because fan is directly connected to motor. Available in four models to cover wide range of application.

Proctor & Schwartz, Inc., Seventh St. and Tabor Rd., Philadelphia 20, Pa.

More data? Write ◆ or use card, p. 201; list K-140

A new **stick-on type of identification badge** for those attending conventions or other gatherings has on the back a special type of adhesive that enables it to stick on clothing without damage to the fabric. Adhesive is covered with a special protective paper that is easily removed when badge is ready for use — just bend badge slightly at center split and then peel it off. When badge is not in use, it may be carried on inside of coat or it may be stuck on outside of glassine envelope — thus the same badge may be used for several days if necessary.

Jack-Bilt Corp., 906 Central St., Kansas City, Mo.

More data? Write ◆ or use card, p. 201; list K-141

A **renewable seat ring gate valve** that positively assures replacement of seat ring in only 7 to 10 minutes under all conditions with just a screwdriver, and with the valve body still installed in the line, is now available. Supplied with rising stem and non-rising stem in several sizes ranging from ½" to 2", the valve is suitable for severe service conditions on 200 lb steam, 400 lb water, oil or gas lines requiring full flow and frequent operation.

The Fairbanks Co., 393 Lafayette St., New York 3, N. Y.

More data? Write ◆ or use card, p. 201; list K-142

"Tycora" is the trade name of a **modified continuous filament synthetic yarn** which offers the advantages of strength and durability found in all continuous filament yarns and also the soft feel and texture of spun yarns. Fabrics produced from the yarn do not pill. The yarn does not lose its shape, even after stretching, and is wrinkle-resistant. Also, it can be dyed any color. Garments made from the yarn can be washed and dried quickly.

Textured Yarn Co., 5400 Poplar St., Philadelphia, Pa.

More data? Write ◆ or use card, p. 201; list K-143

Commercial production of **1600 denier Fortisan-36 yarn,** in addition to 800 denier previously announced, has been started. It is expected that this new yarn will be used in fire hose, V-belts, conveyor belting, high pressure hose and other applications where great strength, low stretch, and dimensional stability are needed.

Celanese Corp. of America, Textile Division, Charlotte, N. C.

More data? Write ◆ or use card, p. 201; list K-144

A new **automatically fed nail driver,** the "Nail-A-Matic," cuts nailing costs. Nails from 2-penny up to

and including 16-penny nails in hard or soft woods, at any angle, straight or clinched, at speeds up to 50 nails per minute. Feeder is air-operated, simple, and ruggedly constructed. Hammer is powered by oscillating pneumatic hammer. Nails are dumped from boxes or kegs into hopper on feeder unit (8 lb capacity) where they are automatically fed through 25 feet of tough flexible tubing to the hammer. Apart from loading this hopper, nails are not handled by the operator.

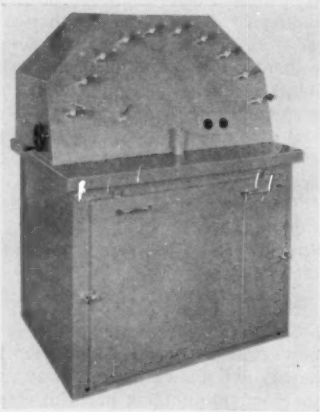
Matrix Engineering Corp., 3016 E. Lake St., Minneapolis 6, Minn.

More data? Write ◂ or use card, p. 201; list K-145

Vacuum Type Roving Bobbin Stripper

With the Famatex roving bobbin stripping machine recently made available through a U. S. agent it is possible to quickly remove roving from bobbins without damaging either the bobbins or the fibers.

Bobbins to be cleaned are placed on the spindles at the front of the machine. Bobbins are all simultaneously driven by a small variable speed motor (speed can be adjusted by the handwheel at the left as you face the machine). The roving ends from the bobbins are then run through the suction nozzle which is in the middle of the table at the front of the machine. The fibers loosened by air suction, fall into a removable basket ready for reprocessing.



Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

More data? Write ◂ or use card, p. 201; list K-146

New Shades in Color-Sealed Acetate

A variety of new colors has been added to the Du Pont Company's line of color-sealed acetate yarns. Styled for specific end uses, the new shades range from pervenche or periwinkle blue for the high-fashion field to a subtle grebe, or silver-gray, for use in simulated fur fabrics.

Like other color-sealed acetate yarns by Du Pont, the new additions are notable for their superior brilliance and resistance to fading.

For dress goods, both the pervenche blue and a rose-beige shade called sandalwood have been introduced. African brown is the name of another color styled for simulated fur fabrics. New colors for knit goods and lingerie tricots include hunter green, old rose, and pistachio green.

E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.

More data? Write ◂ or use card, p. 201; list K-147

Better
IDENTIFICATION BANDS
for your
ROVING CANS

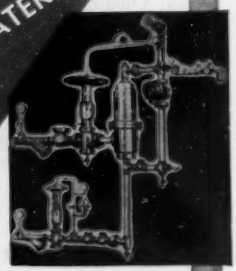
IDENTIFICATION BANDS OF UNITED ELASTIC WEBBING FEATURE

- the most in service
- a very attractive price
- well-made, firmly-woven construction
- securely sewed laps
- any desired color
- bright, solid, even colors
- fast-to-light, non-fading dyes
- easily recognized at a distance
- easily removed and transferred

If you will specify the can diameter; and the color, width and quantity of bands desired; we will submit samples and quote prices.

UNITED ELASTIC CORPORATION
EASTHAMPTON, MASS.
Sales Agent:
Roy Schrimshire
P. O. Box 906, Columbus, Georgia

Insist on Pick INSTANTANEOUS HOT WATER HEATERS



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IN DAILY USE at . . .
Bates Mfg. Co.
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Dan River Mills
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and many others.

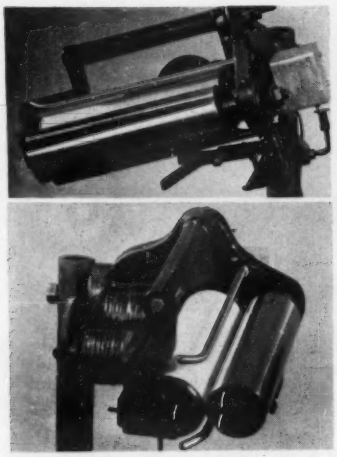
Write Dept. TI354 for booklet on how Pick Heaters cut costs of hot water. No Obligation.

PICK GIVES YOU MAXIMUM EFFICIENCY

★ *Water Is Heated INSTANTLY* by steam injection. Fuel savings are substantial because there is no waste — water is heated only as used.
★ *Pick Heaters Maintain Continuous Flow* at preset temperature for bleaching, dyeing, scouring, etc.
★ *Safe, Quiet Operation.* Exclusive "Pressurizer Piston" assures maximum safety and eliminates hammer, noise and vibration on continuous or "start and stop" loads.
★ *No Storage Tanks Required.* Pick Heaters are compact — can be installed in corners, on walls or overhead. Saves valuable floor space.
★ *Many Other Cost-Reducing Advantages.* Maintenance cost is remarkably low because Pick Heaters can be cleaned in a matter of minutes. Installation is simple and inexpensive . . . only ordinary pipe connections are required.

PICK MANUFACTURING CO.
WEST BEND, WISCONSIN

Electric Guider Switch Will Not Burn Out



(Top) New switch box with arc quencher; (below) position of coils and knurled wheel for instantly adjusting the position of the cradle roll for fine or heavy cloth.

New electric cloth guiders have incorporated in them a method of dissipating the flash or hot arc which heretofore has caused the switch contacts to burn. The switches will eventually wear out, but the contacts will never burn out. Another feature is ease with which a switch can be replaced. A new switch can be plugged in instantly. However, the switch should not require replacing more often than twice a year.

Another feature of the new guiders, known as the Hetherington Super Electrics, is an arrangement by which the position of the rubber cradle roll can be adjusted in relation to the front or stationary roll. The rolls are brought close together for guiding fine fabrics and spaced farther apart for heavier goods. This provides extremely accurate guiding and eliminates practically all of the side-to-side motion of the cloth. The knurled wheel at the back of the coils is used to quickly make this roll adjustment.

All types of air guiders can be easily converted to electric operation with this new switch and adjusting wheel.

Guider Roll & Service Co., P. O. Box 3747, Peninsula Sta., Daytona Beach, Fla.

More data? Write ◂ or use card, p. 201; list K-148

Steam Jet Air Ejector for Vacuum Slot Extractors

The development of a steam jet air ejector and condenser to handle the suction requirements of vacuum slot extractors for pre-drying in the cloth printing process has eliminated many mechanical difficulties.

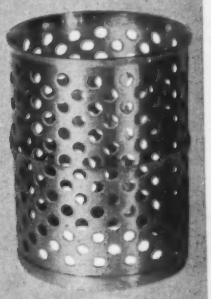
It assures uniform pre-drying and eliminates wear of the moving parts. The ejector has sufficient air handling capacity to maintain 10 to 15 inches of mercury, depending on the weave of cloth. This new vacuum equipment has the following advantages:

1. The cheapest source of power is used — the steam already generated.
2. No moving parts are involved; no oiling or greasing is necessary.
3. Low initial installation and maintenance costs.
4. Only two standard low-cost parts ever require replacement.
5. Water heating as a by-product of vacuum production.
6. Extreme flexibility in installation arrangement.

Condenser Service & Engineering Co., Inc., Hoboken, N. J.

More data? Write ◂ or use card, p. 201; list K-149

A New and Better Stainless Steel Dye Sleeve for B-C Winders



The heavier gauge stainless steel used in this new sleeve supplies its own rigidity and eliminates ribbing. This permits greater hole area and assures much faster dye penetration. Beaded and flared bottom prevents yarn slippage. This simplified construction saves up to 15% in initial cost. Greater strength gives longer service.

All sleeves are perfectly sized for roundness and the holes are evenly spaced for uniform dye penetration. Ends are 100% level and rounded to prevent snagging. Write today for samples and quotations.

Several hundred thousand sleeves of this type are now giving superior service on Foster, Abbott, and Universal Winders.

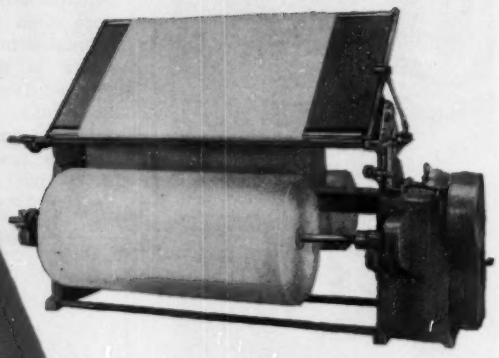
TOOL SERVICE ENGINEERING CO.
309 W. Crowell St. Monroe, N. C.

YOUR Quality FABRICS

gain in customer acceptance when inspected and packaged on Van Vlaanderen Machines

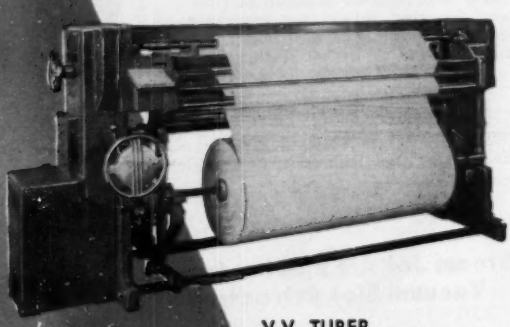
Fussy customers get a good first impression of your quality fabrics when they are packaged and inspected on Van Vlaanderen machines. Here are three modern machines that make your operators' work easier and more accurate.

THE V.V. INSPECTALL is built to a sturdiness and precision not before available. Wide-range variable speed control, instantly reversible, one-motion clutch control, and let-off brake are all operated from examing position — giving high operating efficiency. Any fabric, in rolls up to 36", can be examined face or back. Adjustable examining board. Precision clock measures yards and eigths.



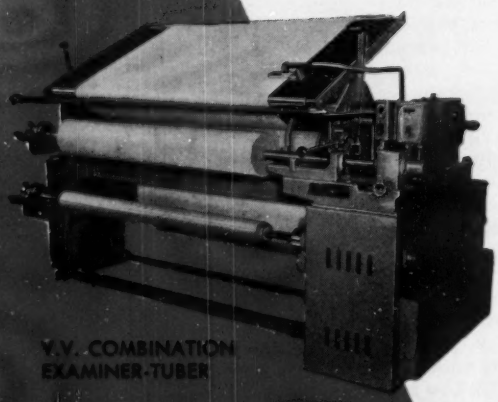
V.V. INSPECTALL

THE V.V. TUBER assures accurate measuring and a better package, especially on fabrics that benefit from tensionless processing. The tension is always under operator's control — from near zero tension to medium tension. Constant cloth speed up to 200 Y.P.M., accurate measuring (measuring drum is driven), controlled density of package, simple, effective selvage alignment, easy loading and operating are other important features.



V.V. TUBER

THE V.V. COMBINATION EXAMINING AND TUBING MACHINE automatically tubes while your operator inspects or he can tube alone. Tubing is better because the automatic selvage guide is quicker in making corrections on all fabrics from sheers to the heaviest duck, plastics or paper. Speed changes from the slowest examining rate to full tubing are easily made through finger tip control, governing a variable speed drive. For rejected yardage (seconds) a supplementary center bar is provided.



V.V. COMBINATION EXAMINER-TUBER

Our engineers are anxious to show you these and other Van Vlaanderen machines.

VAN VLAANDEREN

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street, • Paterson 3, New Jersey

In the South — Parrott and Ballentine • 610 South Carolina National Bank Building • Greenville, South Carolina

WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

Yarn Makes Outerwear Fabrics Visible at Night

Two types of "Flecton" brand reflective yarn for weaving or knitting into outerwear fabrics to make them visible at night (see article on page 133 of this issue) are being marketed: Type 100, rayon base, 1200 denier, with 4000 running yards to the pound, sold in two-pound cones; and Type 200, nylon base, 300 denier, 14,000 running yards to the pound, also sold in two-pound cones.

Both types of yarn enable garments to be vividly reflective 300 to 1,500 feet away at night.

Garments made with the yarn can be laundered, cleaned, and pressed.

The yarn is made reflective by a coating of glass beads so tiny that they are invisible to the naked eye. Each of these beads is a perfect sphere, so that they do not scratch or cut. Otherwise, "Flecton" yarn is similar to any other yarn.

Minnesota Mining and Manufacturing Co., 900 Fauquier Ave., St. Paul 6, Minn.

More data? Write ◂▸ or use card, p. 201; list K-150

Get Softer Finish and Even Shades by Using Low-Calcium Brine

Morton "PCB" Rock Salt can be used to advantage wherever a low-calcium, low-cost brine is desired, or more specifically it is recommended when brine is used in dyeing raw-stock, package, beam, beck or jig with either sulphur, direct or naphthol dyes. "PCB" brine can also be used effectively for zeolite water softening.

Brine made from this new salt averages less than 200 PPM calcium (and even this small percentage will not precipitate due to the "PCB" treatment).

Here are the advantages of "PCB" brine:

(1) Low calcium content means softer finish and even shades, improves crock fastness with naphthol dyes by decreasing precipitation of naphtholate, yields brighter colors in direct dyes, reduces precipitation of sulphur dyes, thus increasing the intensity of color.

(2) Aids in retarding corrosion — particularly noticeable in raw stock dyeing with the direct colors and neutral dye baths when dyeing rayon or cotton.

(3) Low cost — compared to brine produced from purified low calcium evaporated salt.

(4) Reduction in the amount of high cost sequestering agents used — excessive phosphates are used in "PCB" so that the finished brine will have a phosphate content; less cal-

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Experience has proved that only a specialist can do it right every time, and there's never a time when doing a job over isn't more expensive than doing it right the first time. Every Jenkins' Dynamically balanced cylinder and card screen is made under the supervision of qualified engineers to eliminate costly down-time for removal after installation. This being RIGHT every time adds up to savings for you in time, in quality and in lower operating costs.

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WABASH INDIANA

...BUT A SERVICE RECORD WAS BROKEN TOO!

This ABC HAIRON CHECK STRAP gave 9,893 Loom Hours of service on a 32" wide X Model loom running 196 picks per minute.* It's no wonder they're the finest you can buy!

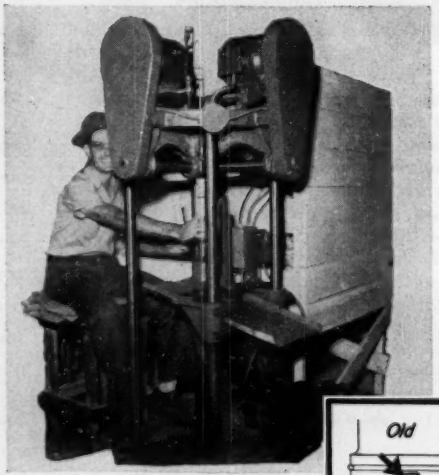
**Name of mill furnished on request.*

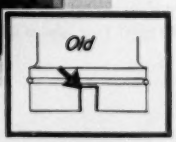
ATLANTA BELTING COMPANY

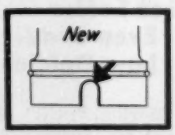
508-510 Whitehall St., S. W., Atlanta, Georgia

MONTICELLO BOBBINS

"Engineered for Service"







Newly designed Milling Machine cuts rounded top Dog Slots which have replaced all sawed Dog Slots on Monticello Card Room Bobbins. This milling cut results in a stronger Bobbin where most splits begin.

MONTICELLO BOBBIN COMPANY

MONTICELLO, GEORGIA

cium to sequester.

(5) Simplicity of purifying compared to more complex (additive) systems, with obvious reduction in the cost of labor necessary for control, initial investment, and costly maintenance under systems of this type.

(6) Not susceptible to mechanical failure, as carbonates and phosphates are pre-blended with rock salt. As the rock salt dissolves, carbonates and phosphates dissolve, and an even constant treatment is obtained.

Morton Salt Co., Industrial Division, 120 S. LaSalle St., Chicago 3, Ill.

More data? Write ◄ or use card, p. 201; list K-151

Molded Shuttles Offer Much Longer Life

A new, molded shuttle called the Draper "Tru-Mold" Shuttle, provides from 2½ to 3 times more service than conventional wooden shuttles.

Heavier than its counterpart made of dogwood, it offers better shuttle flight control with reduced power settings.

The dimensional stability of the material eliminates changes in the shuttle due to atmospheric conditions in the weave room. Shuttle failure resulting from variations in strength of material is reduced.

Shuttle spurs are fixed in the shuttle block at the time of molding. Spurs will not loosen or turn due to the design and the method of molding used.

Shuttle eyes and springs may be assembled under greater pressure without the breaking down of fibers of the shuttle material; therefore springs or eyes do not become loose.

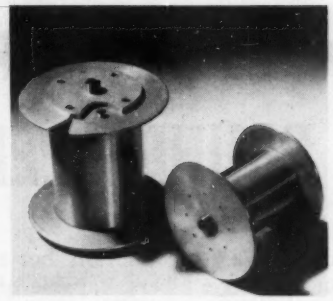
Draper Corp., Hopedale, Mass.

More data? Write ◄ or use card, p. 201; list K-152

No Yarn Snagging with This Take-Up Bobbin

A new take-up bobbin made of one continuous piece of aluminum has already proved its usefulness with Helanca and other nylon yarns.

The aluminum heads are brazed to the aluminum core at such temperatures that the metal actually flows to make one continuous piece. Because there are no joints, there is no need for felt to fill cracks. There is no possibility of snagging yarn because the entire surface is smooth.



← Aluminum take-up bobbin.

The bobbin is of sufficient strength to withstand any of the tremendous pressures generated by nylon. Being aluminum, it is, of course, light in weight. It is available in any size as a regular take-up bobbin or as a transfer take-up bobbin.

Allentown Bobbin Works, Inc., Allentown, Pa.

More data? Write ◄ or use card, p. 201; list K-153

L. F. Dommerich & Co., Inc.

Executive and General Offices

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NEW YORK 16, N. Y.

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Trinity 7171

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UP TO 1500 POUNDS PER HOUR

HOT AIR DRYING at its best

For WORSTED, COTTON and SYNTHETICS

REASONABLE INITIAL COST

LOW OPERATING COST

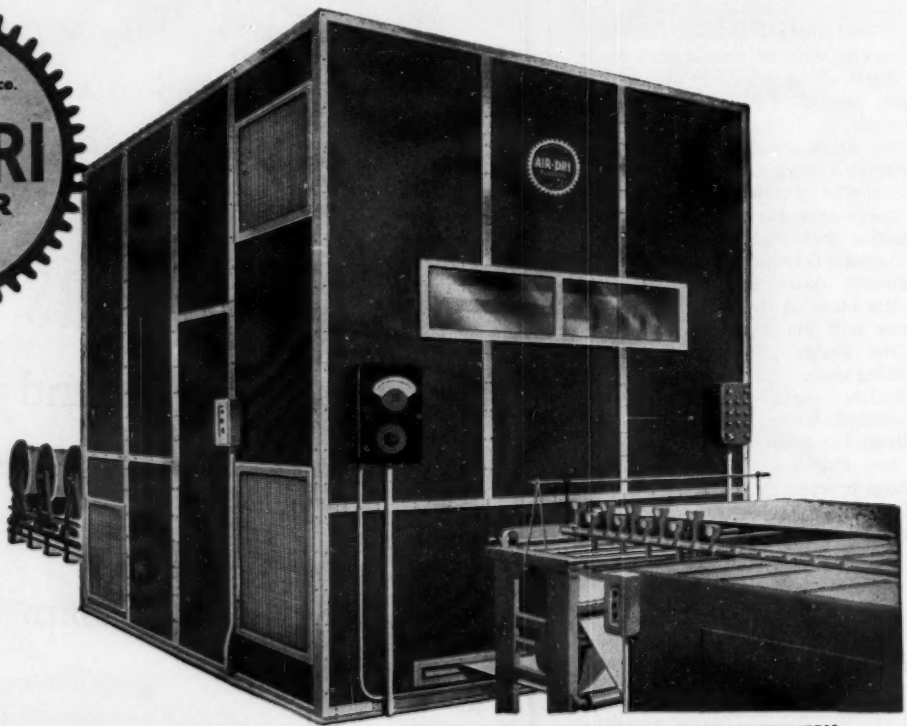
Here's a new high-production hot-air slasher, designed for natural or synthetic fibers, capable of greatly increasing production with little increase in space requirements.

With efficient new Air-Dri Slashers as replacements for out-of-date equipment, you can, in many cases, double or triple your slasher output, eliminate overtime and greatly improve warp quality.

Yarn is 40% dry by the time it reaches the first guide roll. A wet splitting device divides the yarn into layers as it enters the dryer.

We will be glad to furnish you with detailed specifications for the advance-design Air-Dri Slasher on request.

WEST POINT FOUNDRY & MACHINE CO. AIR-DRI SLASHER WEST POINT, GA., U.S.A.



WPF&M

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WEST POINT, GEORGIA

WPF&M WARP PREPARATION MACHINERY

Air-Dri Slashers — Multi-Cylinder Slashers
Cyl-Air Slashers — Callaway Sample Slashers
WPF&M Hi-Speed 4 Cylinder Slashers
Standard 2 and 3 Cylinder Slashers

SLASHER MODERNIZATION EQUIPMENT

Hi-Speed Head Ends — Special Width Head Ends
Additional Cylinders — Multi-Motor Drives
Stretch Control Units — Equi-Tension Creels
Temperature, Speed and Tension Control Devices
Size Boxes, Size Kettles, and Size pumps

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ADVERTISEMENTS

Use this opportunity to keep abreast of new information dealing with machinery, equipment, supplies and services available to your mill.
To obtain more information on advertisements, print the name of the advertiser in the space provided on the card below.
Free booklets and more information on new equipment items may be had by entering their key numbers in the space designated for this use.
This service is made possible by the advertisers of TEXTILE INDUSTRIES as an aid to mill men who want to keep well informed on new developments in the industry. We cannot, however, extend this service to you unless you print or write legibly your name and position, the name of your firm, and its address on the card.
Four cards are provided in case others in your plant would like information . . . and TEXTILE INDUSTRIES pays the postman!

OCTOBER, 1955

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....

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Please send more information on advertisements (give Company Name)

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Name .....Position .....

Company Name .....

Address .....

City .....State .....

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Name .....Position .....

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Address .....

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HELPFUL BOOKLETS FREE!

10-1 Waste Heat Recovery. Color booklet describes Bready System of waste heat recovery from polluted or soiled waste water. Includes pictures and complete facts. Write Ludell Mfg. Co., 5200 West State Street, Milwaukee, Wisconsin.

10-2 Opening and Cleaning Machinery. Color brochure by Dodenhoff describes their waste machine, enclosed feeder, conveyors and cleaner. Specifications included with pictures. Write W. D. Dodenhoff Co., Box 178, Greenville, S. C.

10-3 New Condenser Tape. Literature by Benjamin Booth describes newly introduced SUPR-O-TAPE, an impregnated fabric condenser tape. Shows actual sample of tape and gives complete prices. Write Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

10-4 Industrial Greases. New product information bulletin describing multi-purpose lithium soap industrial greases is available from Sinclair. Write A. S. Randak, Tech. Service Mgr., Sinclair Refining Co., 600 Fifth Ave., New York, N. Y.

10-5 Universal Roto-Coner. Bulletin 144-A by Universal gives details on the Roto-Coner providing open-wind cones and tubes for knitting, warping, twisting, dyeing. Comprehensive pictures and specifications. Write Universal Winding Co., P. O. Box 1605, Providence, R. I.

10-6 Organic Chemical Catalog. Catalog by Antara lists company's products under their Chemical Abstracts name and most common synonym. One of a series describing Antara's products. Write Antara Chemicals, 435 Hudson Street, New York 14, N. Y.

10-7 Pneumafil Lint-Free Creel. Color booklet describes the new Airfoil Design Pneumafil type LFC with Built-in Lint-Free Creel. Gives complete details and pictures. Write Pneumafil Corporation, Charlotte 8, North Carolina.

10-8 Rubber Covered Roll Catalog. Color booklet describes various rolls made for textiles. Advantages and applications are given along with various types of rubber available. Write Tyer Rubber Co., Andover, Mass.

10-9 Low-Calcium Brine. Color booklet describes advantages and properties of Morton "PCB" Rock Salt which provides Low Calcium brine for the Textile Industry. Shows pictures of installations saving money and achieving better results by its use. Write Morton Salt Company, 120 South LaSalle St., Chicago 3, Ill.

10-10 Materials Handling Hand Trucks. Colorful catalog shows samples of specially built hand trucks and fully explains Leebaw's revolutionary service of custom-built trucks at stock prices. Write Leebaw Mfg. Co., 65 Wayne Ave., Youngstown, Ohio.

10-11 Time Recorder Totalizer. Booklet describes instrument designed to reduce "down" time and lower production costs by counting, registering "on" time and monitoring continuously. Write Heat-Timer, 657 Broadway, New York 12, N. Y.

10-12 Cationic Surface Active Agent. Technical Bulletin describes Harshaw's UVERSOFT "D" which produces full, soft hand while acting as an outstanding anti-static agent. Write Harshaw Chemical Co., 1945 East 97th St., Cleveland 6, Ohio.

10-13 Shadograph Weighing Devices. Bulletins describe scales for weighing dyestuffs, cotton samples, wool yarn, cones of yarn. Pictures and complete information on each type of scale included. Write Exact Weight Scale Co., Columbus 8, Ohio.

what a finish!

VINREZ 202

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- **Extreme Clarity of Film**
- **Excellent Stability**
- **Compatible With All Types of Softeners and Starches**
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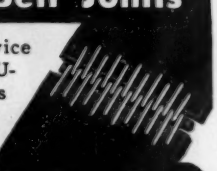

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11. "WHERE DID THEY HIT PAY DIRT?"—Booklet describes how many manufacturing concerns have come South and why they found it profitable. Gives industrial advantages of the Southeast.—CENTRAL OF GEORGIA RAILWAY, Industrial Development Department, 501 Rhodes Haverty Bldg., Atlanta 3, Georgia.

15. NEW INDUSTRIAL FIBER—Technical bulletin now available on Fortisan-36, new industrial fiber by Celanese. Uses text, charts and diagrams to present technical properties, characteristics and recommendations for processing.—TEXTILE SALES DEPARTMENT, CELANESE CORPORATION, Charlotte, N. C.

17. A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK—8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

22. THE WONALANCET WAY—Is the title of a editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written.—WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

100. MOTION CONTROL WITH SILENTBLOC—Brochure describes advantages of General Tire Company's Silentbloc method of protecting delicate instruments, reducing machine vibration, etc.—THE GENERAL TIRE CO., Industrial Products Div., Akron, Ohio.

102. "TANK TALK"—Sixteen-page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

105. CASTERS AND WHEELS—Catalog gives complete descriptions on full line of industrial casters and wheels. Features patented "LOCKWELD" Steel Casters Without A Kingpin" both Single and Double Ball Race.—THE FAIRBANKS CO., 393 Lafayette St., New York 3, N. Y.

106. FINNELL COMBINATION SCRUBBER-VAC—Illustrated literature gives complete specifications and describes various methods of combination-machine-scrubbing, including method recommended for cleaning oily floors.—FINNELL SYSTEMS, INC., 1300 East St., Elkhart, Indiana.

110. UNBRAKO STANDARDS—Catalog by Standard Pressed Steel Co. describes in pictures and text the company's line of Unbrako precision threaded fasteners. Several applications of each product are indicated in line drawings to suggest hundreds of others and to stimulate the imagination of design engineers. —STANDARD PRESSED STEEL CO., Jenkintown, Pa.

111. CERTIFIED CLIMATE AIRCHANGER SYSTEM—Bulletin describes Certified Climate Airchanger System as used with direct humidification for partial or complete air conditioning.—PARKS-CRAMER CO., Fitchburg, Mass.

112. HARDWOOD FLOORING — Booklet entitled "Specialist in Manufacturing of Hard Maple Flooring for textile plants."—CONNOR LUMBER & LAND COMPANY, P. O. Box 810, Wausau, Wisconsin.

113. COTTON MILL EQUIPMENT — This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

114. PENETRATING WOOD FINISH — Bulletin gives applications, uses and application specifications of floor seals for textiles.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, Wilmington, Delaware.

115. FOAMGLAS—Illustrated brochure features information on how the use of Foamglas cellular glass insulation solved the severe insulating problems of leading users.—PITTSBURGH CORNING CORP., One Gateway Center, Pittsburgh 22, Pa.

116. STOP CORROSION—Details on speed Rex paint for metal wood and concrete maintenance solving condensation problems.—TRUSCON LABORATORIES, Box 69, Milwaukee Junction, P. O. Dept. T, Detroit 11, Mich.

117. CLEANING SYSTEMS — Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on system. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

118. LIQUIDATION INFORMATION—Information available on how to profitably dispose of mill properties being liquidated. Tells how Comer will buy, sell and relocate industry in your former site.—COMER MACHINERY CO., 684 W. Peachtree St., Atlanta, Ga.

119. FLEXLOC SELF-LOCKING NUTS—Drawings illustrate locking action. Fasteners are unaffected by temperatures up to 550 Fahrenheit and come in regular heights and thin-nut heights. Catalog contains complete information. — STANDARD PRESSED STEEL CO., Box 582 Jenkintown, Pa.

127. SOLENOID VALVES—Bulletin "V" lists sizes from 1/2 inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

131. "AIR PROCESSING"—Set of three bulletins showing real meaning of the term; where it can be used, the requirements for a successful system, etc.—J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

135. COLOR CONDITIONING—Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington 98, Delaware.

138. METAL CONVEYOR BELTS—Recent catalog describes and illustrates Ashworth's entire range of manufacture, including the new Flat Wire Belt design and application, along with their woven wire constructions and positive drive chain edge belts.—ASHWORTH BROS., INC., Metal Products Div., Fall River, Mass.

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150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated booklet of industrial brushes featuring textile usage on shears, printing machines; also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., 444 Pompton Ave., Cedar Grove, N. J.

153. LAMINATED TEXTILE PLASTICS—Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry.—SYNTHANE CORPORATION, Textile Division, Oaks, Pa.

161. AUTOMATIC CLEANING EQUIPMENT—Complete booklet by American MonoRail shows working details and advantages of the Tri-Rail Cleaner, a great improvement over the original unit.—AMERICAN MONORAIL CO., 13107 Athens Ave., Cleveland 7, Ohio.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, 2530 N. Second St., Minneapolis 11, Minn.

173. BLOWERS AND EXHAUSTERS — Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. PAINT STRIPPING BOOKLET — Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion.—OAKITE PRODUCTS INC., 22 Thames St., New York 6, N. Y.

176. STOKERS AND BOILERROOM EQUIPMENT—For information on boilerroom problems, improvements and apparatus.—McBURNEY STOKER CO., 2110 Peachtree Rd., Atlanta, Georgia.

181. AIR FILTRATION—Bulletin 234 describes and illustrates the Auto-Airmat, which is the Automatic Dry-Type Air Filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER CO., INC., 275 Central Ave., Louisville 8, Ky.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

201. V-BELT DRIVE CATALOG—This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 hp. Contains many concise, accurate drive tables, diagrams, and other important engineering data.—DAYTON RUBBER CO., Dayton, Ohio.

203. TREADED LEATHER BELTING—This 16-page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., Philadelphia, Pa.

208. CUTLER-HAMMER MOTOR CONTROL—Booklets describe the combination starters for the textile industry, for roving frames and spinning frames, loom switch and Cutler-Hammer Motor Control for textile cards.—CUTLER-HAMMER, 315 N. 12th St., Milwaukee, Wisconsin.

209. STEEL PULLEYS—Pictorial review of American Steel Pulleys, their manufacturing processes and some of their end uses. Textile pulleys are featured. —AMERICAN PULLEY CO., 4200 Wissahickon Ave., Philadelphia 29, Pa.

212. GATES TEXTILE ACCESSORIES — Handy pocket-size catalog BHM-7, fully illustrated, gives specifications of Gates textile accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering, and others. —THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

213. LUBRICATION OF ELECTRIC MOTORS—Illustrated bulletin on lubricating and cleaning ball and roller bearings on electric motors.—NEW YORK & NEW JERSEY LUBRICANT COMPANY, 292 Madison Ave., New York 17, N. Y.

216. LUBRICATION CHART—Wall chart contains lubrication recommendations for many industrial needs. Chart covers applications such as hydraulic systems, spindles, air compressors, reduction gears, electric motors, oven conveyors and other general uses.—LINCOLN ENGINEERING CO., 5701 Natural Bridge Ave., St. Louis, Mo.

217. DYNAMIC RESPONSE D-C MOTORS—Illustrated bulletin describes the new Reliance Super 'T' Line D-c, Motors with Dynamic Response. Information is included on speed ranges, acceleration rates, enclosures, dimensions and selection data.—RELIANCE ELECTRIC & ENGINEERING CO., 1088 Ivanhoe Road, Cleveland 10, Ohio.

218. BALL BEARINGS FOR TEXTILE MACHINERY—A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

220. ELECTRICAL AND LUBRICATING DEVICES—Catalog contains complete and descriptive data on all Trico electrical and lubricating devices. Profusely illustrated, it contains list price information.—TRICO FUSE MFG. CO., North 5th at West Chambers, Milwaukee 12, Wisconsin.

222. AUTOMATIC PRODUCTION CONTROL—Booklet by Reeves Pulley Company, shows application of many automatic processes and controls to the textile industry. Well illustrated, it contains engineering data quite useful to anyone interested.—REEVES PULLEY COMPANY, Columbus, Indiana.

223. LUBRICATION OF BEARINGS—Booklet entitled "Lubrication and Maintenance of Ball and Roller Bearings" gives helpful list of do's and don'ts to prolong bearing life. Also includes valuable information on storage and handling of lubricants.—NEW YORK & NEW JERSEY LUBRICANT CO., 292 Madison Ave., New York 17, N. Y.

225. HYDRAULIC SLASHER DRIVES — Color booklet by Vickers shows how hydraulic drives provide an economical approach to improved slasher operation. Has detailed pictures and enumerates advantages.—VICKERS, INC., 1036 Peachtree St., Atlanta, Ga.

229. DODGE GENERAL POWER TRANSMISSION MACHINERY—Catalog describes various types of power transmission apparatus by Dodge. Gives specifications, sizes, applications, and prices. Very comprehensive.—DODGE MANUFACTURING CORP., Mishawaka, Indiana.

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235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pa.

237. MOTOR CONTROL—Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Uses listed and advantages discussed.—CUTLER-HAMMER INC., Milwaukee, Wisc.

238. TEXTILE LEATHERS CATALOG — Catalog by J. E. Rhoads & Sons gives characteristics and advantages of Rhoads "Tannate" leathers. Complete line is listed and described, and tips for correct installation. Copiously illustrated.—J. E. RHOADS & SONS, 2100 W. Eleventh St., Wilmington 99, Del.

240. CATALOG OF NEEDLE BEARINGS—New catalog conveniently presents design, application and use data for five types of needle bearings. Actually an engineering short course on bearings with visual index units.—THE TORRINGTON CO., Torrington, Conn.

253. TEXTILE LUBRICATION—"Lubrication" a magazine published by the Texas Co. is available. Shows methods and means of lubricating chain drives in very comprehensive form.—THE TEXAS CO., 135 East 42nd St., New York 17, N. Y.

256. METERED LUBRICATION—Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc.—BIJUR LUBRICATING CORP., Rochelle Park, N. J.

265. SERVICE PROCEDURE FOR BALL BEARINGS—A Helpful manual for maintenance engineers giving helpful hints on disassembly, inspection, cleaning, lubrication, and replacement of ball bearings in any mechanism.—NEW DEPARTURE, DIVISION OF GENERAL MOTORS CORP., Bristol, Conn.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

302. TEXTILE INSTRUMENTATION—New booklet gives details on Brush Lapcheck, Brush Tension Analyzer, Brush Imperfection Counter, and Improved Uniformity Analyzer. Pictures uses and capacities of each machine discussed.—BRUSH ELECTRONICS CO., 3405 Perkins Avenue, Cleveland 14, Ohio.

313. "THE FAIRBANKS VALVE COMPARISON CHART"—New reference manual important in specification, ordering, and using of bronze and iron-body valves.—THE FAIRBANKS COMPANY, 393 Lafayette Street, New York 3, N. Y.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

337. COUNTING DEVICES—Catalog of Trumeter's complete line of counters for every application where counting, measuring or registering is required. Colored pictures illustrate each application.—TRUMETER COMPANY, 1265 Broadway, New York 1, N. Y.

339. NEW LUBRICATED PLUG VALVES—Illustrated booklet by The William Powell Co. features a new line of semi-steel and steel lubricated plug valves. Advantages include quick and positive shut off.—THE WILLIAM POWELL COMPANY, 2525 Spring Grove Ave., Cincinnati 22, Ohio.

CARDING, SPINNING, WINDING . . .

401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

403. TRAVELING CLEANERS — 4-page bulletin describes the improved Parks-Cramer Frame and Room Cleaners including the Underframe and Floor Sweepers.—PARKS-CRAMER CO., Fitchburg, Mass.

404. LAPLESS ENDLESS SPINNER—Bulletin and full information will be supplied on lapless endless spinner and coning belting.—TON-TEX CORPORATION, 31 Columbus Ave., Englewood, N. J.

408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

411. SHEET METAL WORK—Pamphlet describes spinning cylinders, aspirators, card screens, sheet metal specialties.—GASTONIA TEXTILE SHEET METAL WORKS, INC., 222 East Long Avenue, Gastonia, N. C.

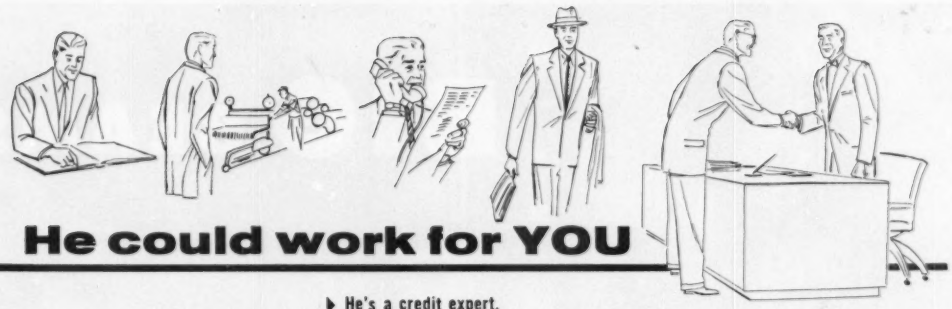
412. SERVICE FOLDER—Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

413. HIGH SPEED, AUTOMATIC QUILLER—Color booklet by Schlafhorst describes the "Autocopser" Automatic Quiller. Gives advantages, space requirements, etc.—TERRELL MACHINE CO., INC., Charlotte, N. C.

414. WORSTED SPINNING—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. DOUBLER-TWISTER FOR LARGE PACKAGES—Bulletin describing two new machines producing straight or tapered top bobbins. Suitable for filament or spun yarns up to three pound capacity. Individual thread stop motion fully discussed.—FLETCHER WORKS, INC., Philadelphia, Pa.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.



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419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

421. CARD ROLL COVERS—Brochure describing the Davis Seamless Roll Covers. Lists advantages, specifications and offers free trial.—THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

422. WARPER BEAMS—Folder describes the high speed for rayon tire cord, cotton warper beams, cast aluminum end supports and large diameter heads.—U. S. BOBBIN & SHUTTLE CO., Lawrence, Mass.

423. SPINDLE OILING MACHINE—Information available on new Spindle Oiling Machine. Features include filter system to clean oil for reuse; smaller size for narrow aisles.—WICACO MACHINE CORP., 4840 Stenton Ave., Wayne Junction, Philadelphia 44, Pa.

424. GREASE-SEALED, ANTI-FRICTION ROLLS.—Booklet contains description and engineering drawings of the Cole grease-sealed, anti-friction rolls. Also contains information on dual apron controlled drafting units.—COLE ENGINEERING CORP., P. O. Box 153, Columbus, Ga.

425. HANDY REFERENCE TABLES — Folder showing spinning traveler speeds, sizes of ring flanges, etc.—VICTOR RING TRAVELER CO., Providence, R. I., and Gastonia, N. C.

426. UNIRAIL UPTWISTER — Bulletin describes Universal Winding's headless package or bobbin take-up Unirail Uptwister which gives you higher yarn quality and better packages at faster speeds and lower costs, according to the bulletin. Well illustrated with advantages discussed.—UNIVERSAL WINDING COMPANY, P. O. Box 1605, Providence, R. I.

429. BETTER FLYER AND SPINDLE EFFICIENCY—Entertaining booklet by Ideal Machine Shops gives facts about Flyers and Spindles which have helped many mills gain more efficient production, better yarn quality.—IDEAL MACHINE SHOPS, INC., Bessemer City, N. C.

431. TEXTILE VACUUM SYSTEM—Color bulletin by Spin Sa Vac describes application of their vacuum system to drawing, roving and spinning processes, and for the removal of broken ends, fly or sliver. Complete diagrams and shots of typical installations.—SPIN SA VAC CORPORATION, 1438 South Tryon St., Charlotte, N. C.

432. PRECISION TEXTILE WINDING—Bulletin on Kidde Tensions and Density Control for winding rubber cones.—WALTER KIDDE & CO., INC., Belleville, N. J.

435. DOUBLE DECK TWISTERS—Bulletin describes Jumbo (8 oz. to 16 oz. headless or take-up spool packages) and Acme (up to 10 oz. packages) models for high speed twisting of silk, rayon, nylon, etc., to finest deniers.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

436. MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER—Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

438. HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING—Literature shows high-speed Face Drive Twister for accurately building tapered or straight-end headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

439. PNEUMAFIL SUCTION CLEANING SYSTEMS—Booklet describes types of Pneumafil Systems, gives details of new Collector Unit model C-4. New type LFC Pneumafil is also discussed. Diagrams, comparison charts and installation pictures included.—PNEUMAFIL CORP., Charlotte 8, N. C.

445. ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

447. CONE WINDER—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

448. AUTOMATIC BLENDING SYSTEM—Dodenhoff system, called "Fiber Meter" is fully described in color booklet. Gives actual operating results, shows pictures and illustrates typical conversion of old fashioned systems.—W. D. DODENHOFF CO., 745 Loundes Hill Road, Greenville, S. C.

453. EVENNESS TESTER—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

458. CONICAL RINGS AND FLYERS — Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., 318 Franklin St., Buffalo 2, N. Y.

459. TENSION CONTROLS—Folder describing tension compensation and automatic tension controls. Three models—Standard, Warp, and Double Disc fully described with specific application.—WALTER KIDDE & CO., INC., Belleville 9, N. Y.

461. PRECISE WIND MACHINE—Form A-92 describes the Foster Model 75 widely used for winding straight or pineapple cones and tubes of rayon, nylon and other filament yarns.—FOSTER MACHINE COMPANY, Westfield, Mass.

462. TEXTILE MACHINERY PARTS CATALOG—A 24-page illustrated catalog describing the complete line of Dayco and Thorobred textile machinery parts including Cots, Aprons, Loop Pickers, Lug Straps, etc.—DAYTON RUBBER CO., Dayton, Ohio.

467. CARD CLOTHING—8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages.—BENJAMIN BOOTH COMPANY, Allegheny Avenue & Janney Street, Philadelphia, Pa.

469. SHORT CUT TO STAPLE FIBER SPINNING—Color brochure shows the ten steps in operation of the Turbo Tow Stapler, gives technical details and diagrams.—TURBO MACHINE COMPANY, Lansdale, Pa.

471. FACTS ABOUT YOUR FLYERS AND SPINDLES—Booklet by Ideal Machine Shops shows how smooth Flyer and Spindle operation can help produce higher and more efficient output, good quality yarn, minimum wear, and larger bobbins.—IDEAL MACHINE SHOPS, Bessemer City, N. C.

472. TWISTING MACHINERY—Bulletin gives outstanding features, specifications facts and useful information on Novelty Yarn Twisters for Cotton, Silk, Worsted and Rayon Yarns.—COLLINS BROTHERS MACHINE COMPANY, 647 Roosevelt Ave., Pawtucket, R. I.

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476. TEXTILE FIBER OPENER FOR COTTON, SYNTHETICS, WOOL—New brochure by Cen-Tennial Cotton Gin Co., gives complete data on the Cen-Tennial Opener which incorporates improvements on the original SRRL Opener. Complete operating procedure is described. Cen-Tennial Cotton Gin Co., Columbus, Ga.

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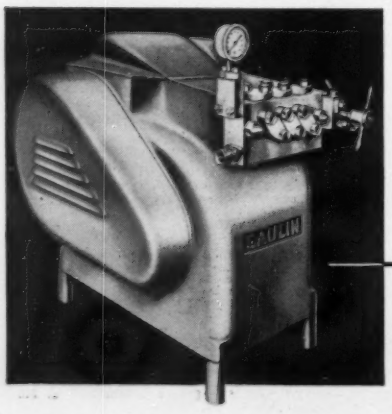

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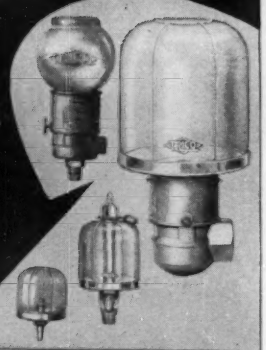

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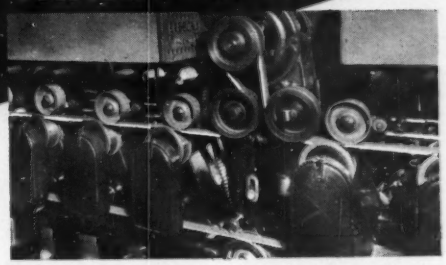

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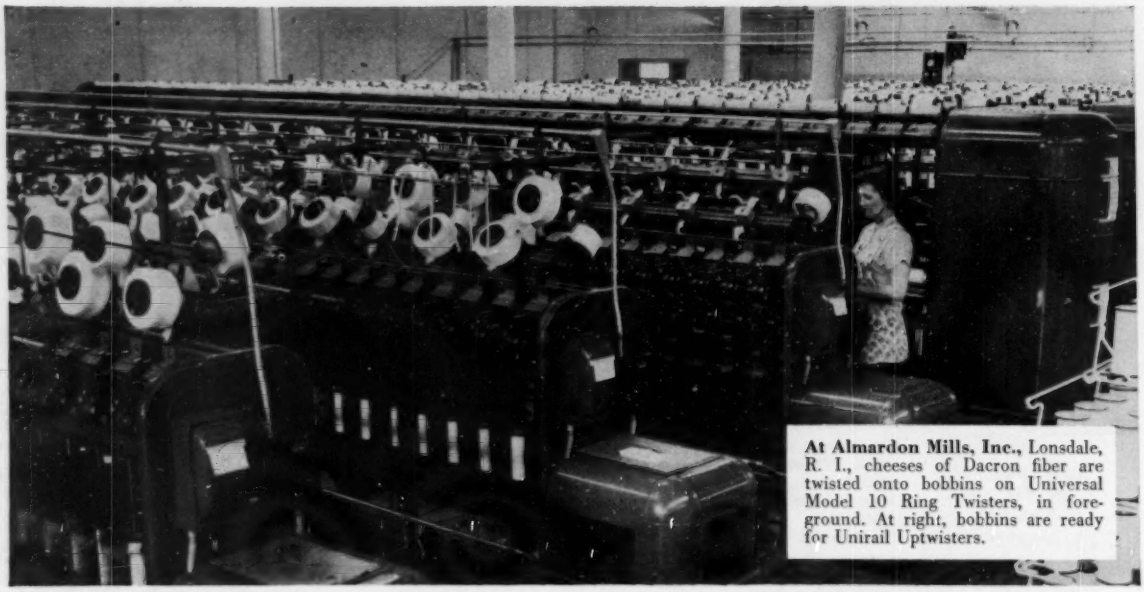

At Almardon Mills, Inc., Lonsdale, R. I., cheeses of Dacron fiber are twisted onto bobbins on Universal Model 10 Ring Twisters, in foreground. At right, bobbins are ready for Unirail Uptwisters.

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All of these precision-machined solid steel collars are size-marked for quick identification, and fitted with the famous self-locking UNBRAKO Socket Set Screw for positive positioning on the shaft. Write for Bulletin 868. STANDARD PRESSED STEEL CO., Jenkintown 34, Pa.

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When reeds, heddles, and drop wires become rusty and soiled, let them soak in a recommended solution of Oakite Compound No. 31; then lightly brush, rinse, and hot-air dry. This simple yet rapid conditioning operation restores parts to a like-new condition—leaves these delicate parts ready for weeks of dirt-free operation. Call or write for details. Oakite Products, Inc., 26C Rector St., New York 6, N. Y.

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769. SURFACE TENSION DEPRESSANT — The booklet, "Mercerizing and Alkamerce—The Ideal Dry" which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

774. ROYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

800. SYNTHANE TEXTILE PARTS—Folder on laminated bobbins, pirns, headless package tubes, hosiery turning and examining forms, sizing bobbins, etc.—SYNTHANE CORP., 9 River Road, Oaks, Pa.

801. THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

803. TIPS ON SEAMING NYLON STRETCH HOSIERY—Pamphlet lists in detail observations and suggestions on seaming nylon stretch hosiery prepared by Union Special as a result of findings of engineers in the field.—UNION SPECIAL MACHINE CO., 407 N. Franklin St., Chicago 10, Ill.

808. REINER WARPER—Full width and sectional warpers for all requirements in the knitting and weaving industry fully described in recent catalog.—ROBERT REINER, INC., Weehawken, N. J.

818. MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION — Catalog 45-A describing Light Metal Tricot Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, INC., Milton, Pa.

828. THE KIDDE KNITTER — Bulletin describing the newest in Raschel-type warp knitting machine and higher production attained with it. — KIDDE MANUFACTURING CO., INC., Farrand St., Bloomfield, N. J.

SEWING MACHINES . . .

924. BUTT-TACKING SEWING MACHINE — Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking.—THE MERROW MACHINE COMPANY, 28 Laurel Street, Hartford, Conn.

MATERIALS HANDLING . . .

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

1006. LANE CANVAS BASKETS—16-page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTH., Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT—56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., 13106 Athens Ave., Cleveland 7, Ohio.

1008. CASTERS AND WHEELS—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—, COLSON CORP., Elyria, Ohio.

1010. CONVEYOR KEY BOOK—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well-illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN CO., 1115 Franklin St., Louisville, Ky.

1018. BALL BEARING TROLLEYS—20-page catalog by Link Belt describes entirely new line of ball bearing trolleys for overhead conveyors. Contains pictures, specifications charts and diagrams.—LINK-BELT CO., 307 North Michigan Ave., Chicago 1, Illinois.

1019. HOW TO SELECT A LIFT TRUCK—An equipment analysis guide and rating table has been introduced by Hyster for comparison and selection of fork lift trucks. Gives an excellent means for price comparison between trucks of a similar nature.—HYSTER CO., 2902 N. E. Clackamas St., Portland 8, Oregon.

1030. CDF RECEPTACLES—This 32-page catalo R-11, profusely illustrated in color, shows nental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

MISCELLANEOUS . . .

1102. BALING PRESSES—An illustrated folder describing this manufacturer's complete line of for all materials. Both downstroke and upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich

1103. UNBRAKO SCREWS — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1111. BRUSHES—A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

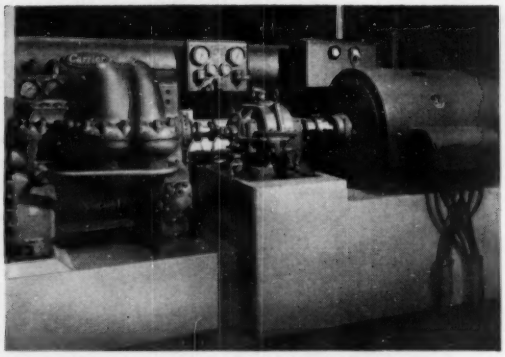
1112. THE RANDOM WEB PROCESS—Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cut-away diagrams.—CURLATOR CORPORATION, Textile Division, 565 Blossom Rd., Rochester, N. Y.

1113. MACHINE KNIVES — Catalog an d price sheets describing this company's line of knives for use on textile machinery.—TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1113. MACHINE KNIVES — Catalog and price chure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made.—HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122. BALING PRESSES—Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished goods, textile fibers, wool, and waste of all kinds.—LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

STONECUTTER MILLS REFRIGERATES WITH A CARRIER CENTRIFUGAL



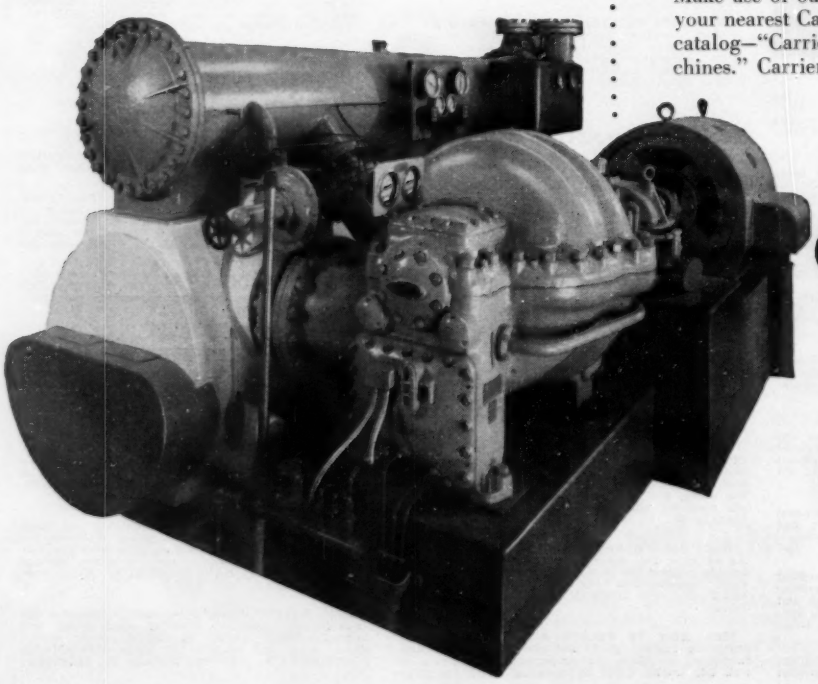
This single 350-ton-capacity Carrier Centrifugal Refrigerating Machine serves three separate air conditioning systems at Stonecutter: (1) in the opening and picking departments, (2) in carding, drawing and roving operations, (3) in spinning, twisting, winding and quilling areas. Temperatures throughout stay constant, yet humidity can be varied for different operations in the mill.

Carrier Centrifugals serve dependably—often around the clock—in many mills, including Greenwood, Amertron, Spindale, Deering Milliken.

Carrier developed the first centrifugal refrigerating machine in 1922. Carrier has built more of them—by far—than all other makers combined.

For unbeatable performance, why not insist on Carrier centrifugal refrigeration for *your* mill? It can serve dependably as the heart of *any* air conditioning system. Carrier Centrifugals are available in many sizes from 100 to 4000 tons cooling capacity.

Make use of our experience and assistance. Call your nearest Carrier office. Or write for our free catalog—"Carrier Centrifugal Refrigerating Machines." Carrier Corporation, Syracuse, New York.



Carrier

air conditioning

refrigeration

industrial heating

What the TEXTILE MILLS are doing

(Continued from page 74)

dising policies." Colonel Elliott Springs, president of The Springs Cotton Mills, accepted the award "on behalf of all those who work for Springs Mills."

Frank B. Healis & Co., a Philadelphia wool waste firm, has purchased the Bristol, Pa., wool top plant known as **Warner J. Steel Co., Inc.**

Talon, Inc., is planning to liquidate the Hamden, Conn., plant. Some time ago the narrow fabric weaving division was centered in Stanley, N. C., and it is now planned to move the zipper-making machinery to the main plant in Meadville, Pa.

Warner Bros. Co., knitter of corset blanks in Hope Valley, R. I., is planning to move to the former Stillwater Worsted Mill in Ashaway, R. I.

Washington Fibers, Inc., Lawrence, Mass., wool processor, occupies a part of the former Washington Mills building.

A new organization for the manufacture of seamless hosiery is known as **Wearmore Hosiery Co.** in Winston-Salem, N. C. Temporary location of the plant is at 2216 Old Rural Hall Road. It was announced that about 200 machines are being installed and 125 to 150 persons will be employed initially. Plans call for the erection of a new building with space to accommodate up to 1,000 machines on the Mocksville Highway about three and one-half miles outside the city.

A combination stretch nylon and combed cotton yarn for half-hose manufacture will be produced by **Wilson Textile Products, Inc.,** a firm which has purchased the machinery and equipment of Harrill Yarn Co. in Rutherfordton, N. C.

Windy City Knitting Mills, Inc., Hickory, N. C., has been purchased by Chester H. Roth Co., Inc.

More than one million dollars will be spent during the next few months at the Greenville, Easley, and Liberty, S. C., plants of **Woodside Mills** for expansion and modernization. About $250,000 of this is being spent at the Greenville plant in the spinning departments for 50,000 new filling spindles, 500,000 new quills, and some experimental drafting change-overs to be installed on some warp and filling spinning frames. Approximately $100,000 will be spent at the Liberty plants; a portion of this has already been used for a new drawing-in machine which is now in operation. In addition to a $225,000 tower building now under construction at Easley, another $450,000 has been earmarked for this plant for improvements in the carding and spinning departments.

A $2,000,000 expansion program has been initiated by **Rittenhouse Hosiery Mills, Inc.,** of Boyertown, Pa. It is expected that the program will be completed in 1956. Among the projects is a building that will provide 14,000 sq ft of additional floor space. The main knitting room section, which is air conditioned, has already been occupied and the rest of the building will soon be available. An increase in employment from 150 to 250 will be required when the program is completed.

The textile engineering department of **Alexander Smith, Inc.** has been combined with the research and development department. A. Griffin Ashcroft, vice-president, directs the work of both departments. "The combining of the two departments will provide a stronger and more effective operation," the announcement said. * * * Part of the company's new warehousing program was the official opening of a 125,000 sq ft warehouse at North Brunswick, N. J., and the closing of warehouses in Buffalo, N. Y., and Philadelphia, Pa. Other new warehouses and consolidations will be announced later, as part of the company's effort to give better and faster service to its customers.

Amerotron Corp. has introduced a new line of Superlite nylon fabrics to serve as the base for nylon weather-proof protective covers. The fabrics, designed to give greater strength and durability to tarpaulins, are high tenacity nylon in 210 or 840 denier.

A new high tenacity rayon sewing thread, which offers up to 30% savings on thread costs in the manufacture and closure of multi-wall paper bags, was announced recently by **American Enka Corporation.** The strength and elastic properties of the new product permit the use of a smaller size thread, which means greater yardage per pound.

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of

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Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"They have done an outstanding job for us. I consider them as the outstanding organization in this field."

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Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles," and our booklet "A Fair Day's Pay and in return A Fair Day's Work".

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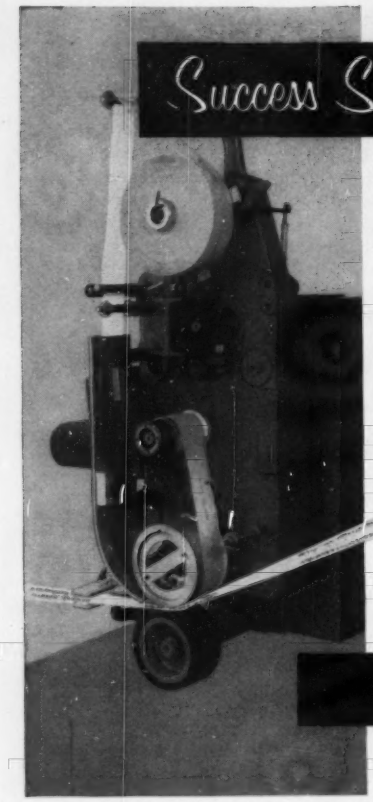
250 PARK AVENUE, NEW YORK 17, N. Y. — GRANT BUILDING, PITTSBURGH, PA. — 30 CAMDEN ROAD, ATLANTA, GA.



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fully automatic SELVAGE or BACK marking machine

Protect and promote *your* merchandise with this low cost, fully automatic Marking Machine designed by Kaumagraph's Engineering Department.

The nation's top weavers, finishers and textile printers find the efficient simplicity of this compact machine the economical solution to their product identification requirements.

Equipment automatically applies single and multi-color transfers to either one or two selvage edges at speeds up to 45 yards per minute.

Easily installed on virtually any finishing room machine . . . a separate operator is not required.

Call or write for complete information and specifications.

SPEED—Applies transfers to either one or two selvage edges up to 45 yards per minute.

VERSATILITY—Affixes single or multi-color marks, either concurrently or alternately on the two selvages to natural and synthetic woven goods.

SIMPLICITY—Operates automatically with virtually any standard finishing room machine.

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SAMUEL T. COLERIDGE, 1831

A vital part of our service is to help supply all of the facts that are material and to assist in drawing legitimate deductions from them.

JOHN P. MAGUIRE & COMPANY, INC.

FACTORS

370 Fourth Avenue, New York
Murray Hill 3-4141

SUPPLIERS News

WHAT THEY ARE DOING

John W. Allis has been elected president of **The Louis Allis Company,** succeeding E. P. Allis, who is now chairman of the board.

As the result of recent personnel changes in the textile resin department of **American Cyanamid Co.,** A. L. Logan has been appointed to the technical field service; L. J. Moretti is now supervisor of the sales service group of the textile resin laboratory; and R. W. Cashion has been transferred to the company's Bound Brook, N. J., sales office as a liaison correspondent.

Malcolm V. Macfarlan, manager of rayon filament sales for **American Viscose Corp.,** has been appointed head of the sales council. John C. Wilmerding is now manager of staple sales, and Charles J. Mills has been promoted to manager of acetate sales. * * * Louis Welch is the newly appointed New York district sales manager.

Aquex Development & Sales Corp. has announced the appointment of Dr. Marcel J. Pagerie to the offices of vice-president and general manager.

Atlantic Steel Co.'s $10,000,000 modernization program for its Atlanta, Ga., facilities will include construction of a new building to house its executive offices, sales department, fabricating engineering, purchasing, advertising, bookkeeping, and electronics records sections. Contemporary in design, the three-story air conditioned building will feature Georgia marble and limestone.

At **Bakelite Co.'s** new Bound Brook, N. J., laboratory scientists, engineers, and technicians are studying all phases of packaging on a scientific basis, with the purpose of exploring new uses and developing new handling techniques for the company's plastics.

Becco Chemical Division, Food Machinery & Chemical Corp., announced plans for a multi-million dollar expansion of the hydrogen peroxide producing facilities at its Buffalo, N. Y., and Vancouver, Wash., plants.

The Buda Division, Allis-Chalmers Mfg. Co., Harvey, Ill., announces the appointment of **W. D. Dodenhoff Co., Inc.,** 745 Lowndes Hill Road, Greenville, S. C., as distributor for the company's complete line of material handling equipment in the state of South Carolina.

John P. Holmes, vice-president of **Celanese Corp. of America,** who is in charge of merchandising activities of the textile division, has been elected to the board of directors. * * * Mrs. Jane Wallace has been named director of advertising and promotion for the textile division, and Paul D. White has been advanced to director of converter relations.

The Chemstrand Corp. announced that capacity of its Pensacola, Fla., nylon plant is being increased to a total of 88,000,000 pounds per year.

Fred Adams has been named assistant sales manager of **The Colson Corp.,** Elyria, Ohio. * * * Promoted to the position of branch manager in New York City was E. L. Messmer, replacing J. D. Ramsey who is now franchised Colson dealer for the state of Florida.

Robert S. Lynch, president of Atlantic Steel Company, has been elected chairman of the board of **Continental Gin Co.** to succeed George W. Woodruff who has been named chairman of the executive committee.

Gordon B. Harvey has been appointed sales manager of the textile division of the **Curlator Corp.**

John W. Stanley, who until recently operated his own company to service the textile industry, has joined the sales department of **Curtis & Marble Machine Co.** with headquarters at the main office in Worcester, Mass.

The Dayton Rubber Co. has opened new headquarters for the Koolfoam cushioning and textile division's sales promotion and advertising offices at 100 Fairview Road, Asheville, N. C.

The Dewey & Almy Chemical Co., division of **W. R. Grace & Co.,** has

BENJAMIN BOOTH COMPANY, the originators of STRIP-O-MATIC card clothing, manufacturers of a complete line of quality card clothing

ANNOUNCE

SUPR-O-TAPE

THE PROVEN FABRIC

CONDENSER TAPE

NOTE THESE ADVANTAGES:

- LONG LIFE
- NO STRETCH
- HIGH STRENGTH
- NO SURFACE CRACKING
- NEEDS NO OIL
- HOLDS SQUARE EDGES INDEFINITELY
- CAN BE MADE ENDLESS IN ANY LENGTH
- LOW IN COST

Write the Benjamin Booth Company today for full details and prices.

BENJAMIN BOOTH COMPANY, ALLEGHENY & JANNEY STS., PHILA., PA.

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says **FRANK M. FOLSOM**, President, **RADIO CORPORATION OF AMERICA**

"Regardless of title," Mr. Folsom continues, "every business executive has the same job: *To make decisions that save money—and make money.*

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Write for list of NPB publications and "Here's How" booklet, "How Well Will We Have to Sell Tomorrow?", by Ralston B. Reid, Advertising & Sales Promotion Manager, Apparatus Sales Division, General Electric Company, Schenectady, N. Y.

SUPPLIERS News
WHAT THEY ARE DOING

doubled facilities for producing polyvinyl acetate polymers and copolymers used in textile sizings and other products, at its Cambridge and Acton, Mass., plants.

William T. Rossiter, Jr., is now manager of leather and textile sales for **Dow Corning Corp.** Willis D. Dicome is assistant manager of textile sales, and Charles J. Lenz is assistant merchandising manager for the textile and leather industries.

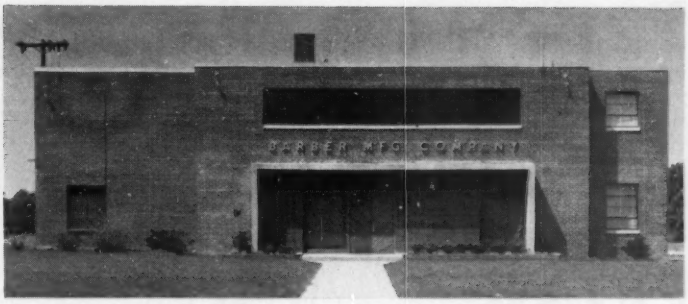
Ford B. Draper has been promoted to general director of sales of **Du Pont's** textile fibers department, succeeding Lester S. Sinness who has been made assistant general manager. Arthur M. Saunders is now director of sales. * * * The department has opened an attractive new display room in its New York offices with cabinet space for 1,800 fabric samples.

A branch plant of **Eastern Engraving Co.** of Johnston, R. I., has been opened at 100 Guest St., Greenville, S. C., with Harold Derry as manager.

R. E. Rogers has been appointed West Coast sales manager for **The Foxboro Co.**, with headquarters at the new branch factory in San Leandro, Calif. Other Foxboro personnel changes: E. W. Pitt is now Los Angeles branch manager; D. P. Thomas is branch manager at Shreveport, La.; M. F. Parr is regional engineer at San Leandro; C. E. Heegard is industrial engineer at Los Angeles; and C. J. DeVilbiss is industrial engineer at Shreveport.

Recently elected officers of **Emkay Chemical Co.**, Elizabeth, N. J., are: Albert Malick, president; Joseph Coupe, vice-president; and H. Martin Friedman, secretary-treasurer. * * * Russell J. Bray has been added to the technical sales staff in the New England area, and Thomas Hunt has been appointed assistant to A. P. Roy, sales manager in the Georgia-Alabama-Carolina area.

Francis K. Burr has joined **Fabric Research Laboratories, Inc.**, Dedham, Mass. Mr. Burr was formerly in charge of the technical services of the quality control department of Burlington Mills in Greensboro, N. C. In his new position, Mr. Burr is assigned to projects involving the use of mechanical and chemical methods for finishing fabrics. He works with client mills in improving their processing procedures and products.



New spindle tape plant in Charlotte, N. C.

Leonard C. Pratt, Jr., who has been president of the Avonshire Knitting Mills, Inc., Philadelphia, Pa., for the past eight years, has joined **Factors Corp. of America**, where he is serving in the new business department.

Christopher P. Jones has been appointed manager of the Plastafol department, folding cartons division, of **Robert Gair Co., Inc.**, New York. * * * David E. Anderson is manager of the company's new quality control laboratory at its Pennsylvania corrugated box division in Philadelphia.

Barber Manufacturing Co. has completed a modern, air conditioned building at Charlotte, N. C., for production of spindle tapes for driving spinning, spooling, and twisting machinery. R. T. Dixon is treasurer and manager.

Finetex Incorporated has moved to new quarters at 418 Falmouth Ave., East Paterson, N. J.

M. Harry Foster, who has been associated with the Hunt Loom & Machine Works for the past three years, has joined the **Louis P. Batson Co.** of Greenville, S. C.

Industrial Rayon Corp. is erecting a new plant on a 7-acre site at West

So Smooth—So Strong
So Thrifty

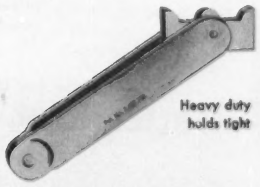
DODENHOFF
Anti-Friction
Dobby Loops*

Their roller bearings give you the smoothest rolling harness you ever saw. Easy on jack levers, too. Stamped steel and case hardened cleats and rollers give triple strength and service.

Put Dodenhoff Anti-Friction Dobby Loops on your heads and you'll save money on replacements and in down-time. Order a supply today or write for samples and prices.

Carried in stock.

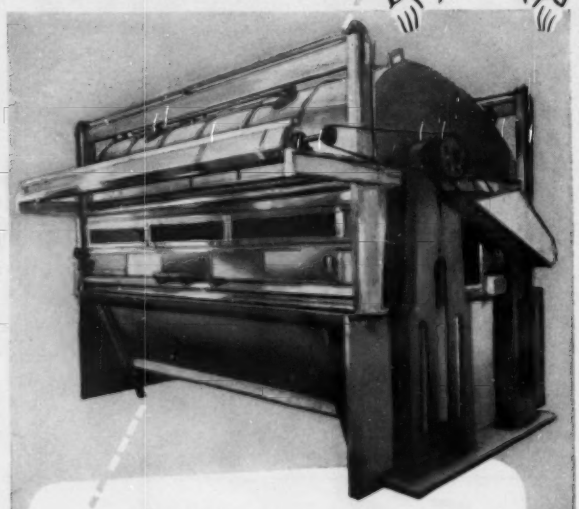
Standard roller and bearing


Heavy duty holds tight

*Patented

W. D. DODENHOFF CO.
INCORPORATED
GREENVILLE, SOUTH CAROLINA

3 Features designed for LOW COST DYEING



1 This Dyebox is Fully Enclosed

– to keep heat and moisture where they belong, in the box; to save fuel, steam, water and dyestuffs; . . . to end dyehouse fog; to increase production per man hour; to give you better work.

2 This Dyebox is Stainless Steel

. . . to clean in seconds with a quick rinse; . . . to eliminate boil outs; . . . to end discoloration of fabric; . . . to change from dark to light runs in a few seconds; . . . to give you more runs per day at lower cost.

3 This Dyebox is Blickman Built

. . . to be as accessible as an open box with none of the disadvantages; . . . to give dyers every design feature for speedier loading, heating, lacing, unloading and changeover; . . . to assure trouble free operation for many years.

Write for bulletin 7034

S. BLICKMAN, INC. 210 GREGORY AVE. WEEHAWKEN, N. J.

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STAINLESS STEEL TEXTILE EQUIPMENT

Dye Boxes, Linings, Cylinders, Dry Cans, Hoods, Tanks

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Our guarantee of satisfaction and two to three weeks delivery on repairs to all types . . .

Rollers
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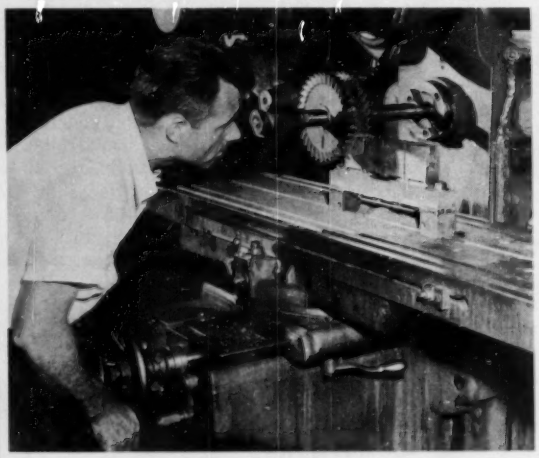
. . . is the solution to the repair problems of our steadily increasing list of Satisfied Customers. They have come to expect—and depend on—our Proud Pair . . . Quality Workmanship with Prompt Service.



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In addition to repairs, we make

New Steel Rollers,
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SATISFACTION GUARANTEED

SUPPLIERS News
WHAT THEY ARE DOING

158th St. and Puritas Road, Cleveland, Ohio, to house operations of its central engineering shops. * * * Bryce R. Holt, Jr., has joined the company's sales staff in Greensboro, N. C.

Thomas L. Carver has been appointed sales manager of the eastern region of **L. O. F. Glass Fibers Co.**, with headquarters at 441 Lexington Ave., New York City.

The Halsmith Corp., 236 Forsyth St., S.W., Atlanta, Ga., is a new subsidiary of the **Southern Belting Co.**,

Mr. Dickinson

formed for the purpose of merchandising highly specialized power transmission equipment and controls. Ingram Dickinson is treasurer.

Rodney Hunt Machine Co., Orange, Mass., has appointed Christopher C. Ganos as sales engineer to assist Tom Kitchen in handling equipment sales

Mr. Ganos

and service for the textile machinery division in the southern territory, with headquarters at 121 Cleveland St., Greenville, S. C.

Construction is under way on **Pittsburgh Plate Glass Co.'s** multi-million dollar glass research center near Pittsburgh, Pa. Two separate buildings, situated on a 52-acre site, feature virtually all-glass exteriors.

The Ordnance Gauge Co. of Philadelphia has presented a $7,000 circular knitting machine for interlocking

HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

J. N. ANDERSON, *Treas.*

LAWRENCE, MASS., U.S.A.

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. . . Better Balance

Customers report these section beams, made of high strength aluminum alloys with eighteen ribs for maximum rigidity and durability, continue to run true after repeated warping and shipping cycles.

Heavy gauge steel tires are giving exceptionally trouble-free service, and our patented method of head mounting assures freedom from trapped yarn and economical replacement of all components.

Adaptable to all warpers, and supplied in both standard and special sizes to meet your requirements.

Additional information, prices and delivery gladly furnished on request.

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For a long-wearing doffing basket to fit the individual requirements of your mill insist on the Lane Style 20. The tough, snag-proof body, built over a strong, resilient frame, gives low-cost, dependable service because of these exclusive Lane features:

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- Longitudinal frames are embedded full length in cross-braced shoes of close-grain hard wood.
- Lane duck, woven to exacting requirements is sewn into tough body with completely smooth inside surfaces.
- Specially tanned binding leather and short, tight stitches of long-staple cotton thread for extra wear.

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Canvas Doffing Basket

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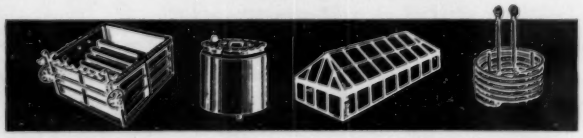

SUPPLIERS News — WHAT THEY ARE DOING

and jersey stitch to the knitting department of the Philadelphia Textile Institute, with delivery to be made in October. The company plans to replace the machine periodically with the latest models.

Vernon H. Brockman, who was previously associated with Firestone Textiles, Gastonia, N. C., has now

Mr. Brockman

joined the testing equipment division of the **Uster Corp.**, Charlotte, N. C., as a sales engineer.

To provide additional manufacturing space for its spinning frame equipment, **Roberts Company** has leased the Father George Cotton Mill at Sanford, N. C. * * * The company has also acquired a 54-acre site at Sanford, where construction of a new plant will begin in 1956.

Warren V. Shenk has joined the sales department of **Scott & Williams**

Mr. Shenk

Inc. in New York City and the surrounding area. He represents The Brinton Fabrics Machine Division.

John W. Cull, who recently became vice-president and director of **Singer Sewing Machine Co.**, is head of the manufacturing trade department. Henry Wedemeyer is director of sales.

Testworth Laboratories, Inc., Addison, Ill., recently acquired the No. 1 Mandeville Mills building in Carrollton, Ga., for the manufacture of latex

NEW U.S. ACME Combo TWISTER

3 machines combined into 1

No. 1 CONVENTIONAL UP-TWISTER

No. 2 HEADLESS PACKAGE UP-TWISTER

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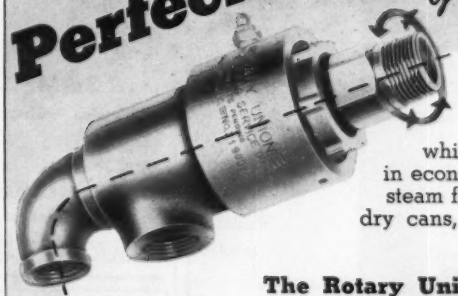

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Precision scale—11 lb. capacity. Dial, 2" travel equivalent to 2 ounces over and under. White baked enamel finish, stainless steel platter, nickel silver scoop.

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Heavy duty scale—500 lb. capacity. Hydraulic dampening device brings indicator to rest quickly. Easy to read dial with 3" indicator travel equivalent to 3 lbs. over or under.

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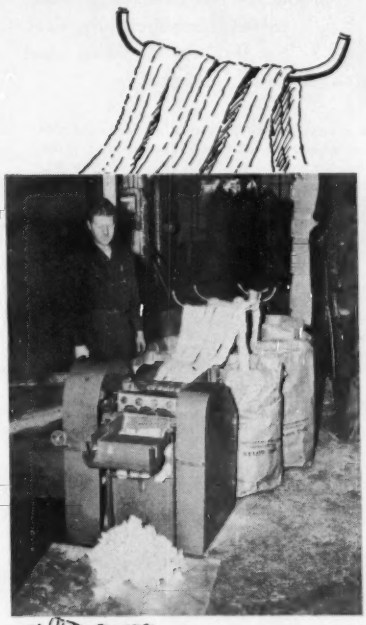

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Taylor-Stiles machines cut multiple slivers, roving or continuous filament into any desired staple length.

The shearing action of the knives cuts the nylon yarn being processed in this picture cleanly into 2" lengths —without fusing at rates up to 2,000 pounds an hour.

The length of cut is readily changed by either a change in the gears or by means of a variable speed motor.

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TAYLOR-STILES and Company
CUTTING MACHINES & KNIVES

SUPPLIERS News
WHAT THEY ARE DOING

compounds for the textile industry. Ty Cobb of Carrollton is general manager.

Austin B. Swallow was recently ap-

Mr. Swallow

pointed New England representative for **Metlon Corporation.**

Square D Company is starting construction of a new plant at Royal Oak, Mich., scheduled for "substantial completion" this year.

The Steel Heddle Mfg. Co. received a safety award plaque from the Pennsylvania Manufacturers' Association in recognition of a million continuous man-hours of production without a disabling accident.

Stein, Hall & Co., Inc., has announced the appointment of Lewis Blackshear as a textile salesman op-

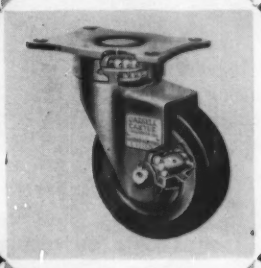
Mr. Blackshear

erating from the company's Charlotte, N. C., branch and servicing the textile grey mills in South Carolina.

Clarence H. Rowe has been named sales manager of **The Torrington Co.'s** needle division, and C. Raymond Johnson is assistant sales manager. * * * Wesley B. Meeteer has been promoted to manager of the division's Chicago office.

U. S. Patent 2,715,754 on the Tritex drawing system has been granted, and all rights to this drawing in America are assigned to Earl Heard, Jr., president of The Tritex Corporation, Lanett, Ala. Mr. Heard intro-

you can't go wrong



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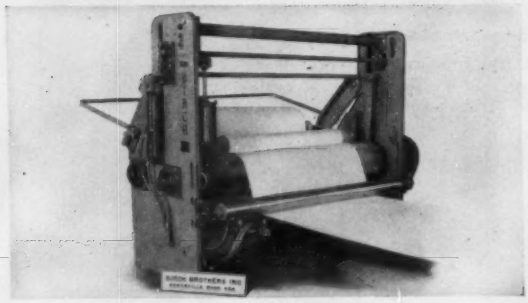

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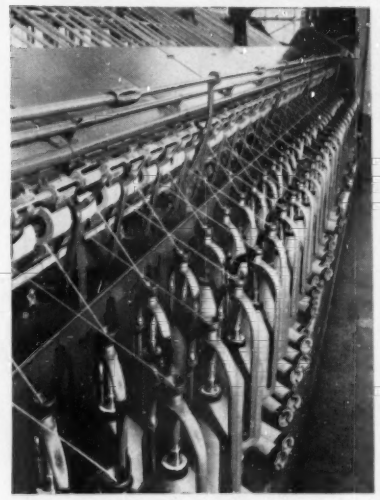

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Write for details today. Orders will be filled in one to ten days.

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Tillicum

RUBBER COMPANY

LACEY WASHINGTON

SUPPLIERS *News* — WHAT THEY ARE DOING

duced the unit in this country. Principal feature of Tritex (2 over 3) is a 3-roll unit, including a large top roll and two small bottom rolls. The drafting system is applicable to comber draw boxes, drawing frames after combing, and to finisher drawing frames in carded mills. Conversions of standard frames are available from The Tritex Corporation.

Dr. Warren Stubblebine has recently been appointed director of research and development by **Stowe-Woodward, Inc.,** Newton, Mass. His efforts

Dr. Stubblebine

are being concentrated on the use of rubber and rubber covered rolls in textile finishing and paper making, with emphasis on new materials and processes leading to higher operating speeds and reduced operating costs.

At a recent meeting of the board of directors of the **Trust Co. of Georgia,** Atlanta, Ga., Robert H. Phillips was

Mr. Phillips

advanced to assistant vice-president in recognition of his increased responsibilities in the Factoring Division.

R. F. Edgar has been appointed as industrial sales manager of the **Warner Electric Brake & Clutch Co.**

The division of Abney Mills formerly known as **Hunt Loom & Machine Works** has changed its name to **Southeastern Loom & Machine Works.** Management and operations remain the same.

Central Motor Lines, Inc., has opened a new terminal midway between Durham and Raleigh, N. C., to

Call **MILTON** *for dependable* **BEAMS**

Light Metal featuring continuous welded construction

NYLON & RUBBER YARN BEAMS

FORGED HEADS
RIGID BARRELS

Forged heat-treated aluminum alloy heads and extra heavy wall barrels designed to withstand extreme pressures of monofilament; fine denier; low-turn nylon; and rubber yarns. 13¾" and 21" diameter heads.

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Shown above is Milton's stud construction (also made with cast iron hubs).

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Adjustable head with fixed shaft, or fixed head with removable shaft.

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Quality control man for worsted textile mill in the South. Actual experience preferred—textile school training acceptable. Write stating full particulars in respect to personal status, experience and references. Reply to Box 725, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

"WORSTED YARN DYEING EQUIPMENT FOR SALE—IN GOOD CONDITION—50 POUNDS, 100 POUNDS, 250 POUNDS AND 500 POUNDS MACHINES—PRINCIPALS ONLY." Reply to Box 726, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

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UNITED STATES
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SUPPLIERS News — WHAT THEY ARE DOING

better serve shippers in that area. * * * Direct motor freight service has also been provided to 57 additional points in the industrial area surrounding Greenville and Spartanburg, S. C.

Howard S. Pellatt of Saylesville, R. I., has been appointed sales representative of **Watson-Williams Mfg.**

Mr. Pellatt

Co. of Millbury, Mass. He will cover mills in southern Massachusetts, Connecticut, and Rhode Island. Mr. Pellatt was formerly associated with New England Shuttle Co.

Paul G. Logue, formerly with Burlington Mills Corp. at Altavista, Va., is now manager of **Wica Chem-**

Mr. Logue

icals, Inc.'s new resin sales service department. * * * Marshall W. Ramsey is now representative of the company in Virginia, North Carolina, Georgia, and Alabama.

C. I. T. Corporation has moved its Philadelphia division offices into a new building at 3 Penn Center Plaza. * * * The company's Atlanta, Ga., offices have been moved to a recently completed building at 55 Marietta St.

Edwin R. Young, who recently joined the technical sales staff of **Colloids, Inc.,** Newark, N. J., covers the Pennsylvania-Virginia-Maryland-Delaware territory, where he services all warp sizing, throwing, spinning, and dyeing and finishing accounts. Mr. Young came to Colloids from The Verney Corp.

Latest addition to the staff of **Werner Textile Consultants** is Dr. Leland S. Liang who has joined the firm's marketing research department.

John T. Sacha has joined the **R. P. Adams Co., Inc.,** as sales engineer, and will work out of the home office.

Tops for Cotton Tire Cord Paper

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Collins Big Ring Twisters produce 4 to 12 lb. packages of exceptionally clean knotless yarns, when employing a 6 to 8 in. ring size.

High Speeds are possible because Collins Big Ring Twisters are equipped with large diameter pulleys, anti-friction idlers, ball bearing front roller stands, large diameter feed rolls, and roller bearing spindles.

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Control MAXIMUM PRODUCTION
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1% Accuracy for any range from 30 to 100 000 RPM or surface speed.
Antimagnetic durable mechanism; Efficient repair service at moderate charges.
IDEAL FOR MOTORS - SHAFTS - SPINDLES - LOOMS - TURBINES - FOR TEXTILE AND POWER PLANTS
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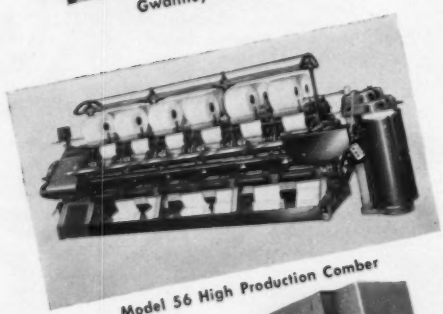

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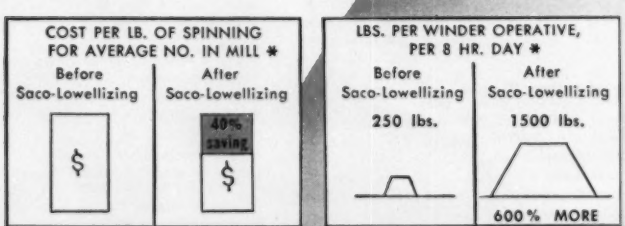

* Abstract from actual case history

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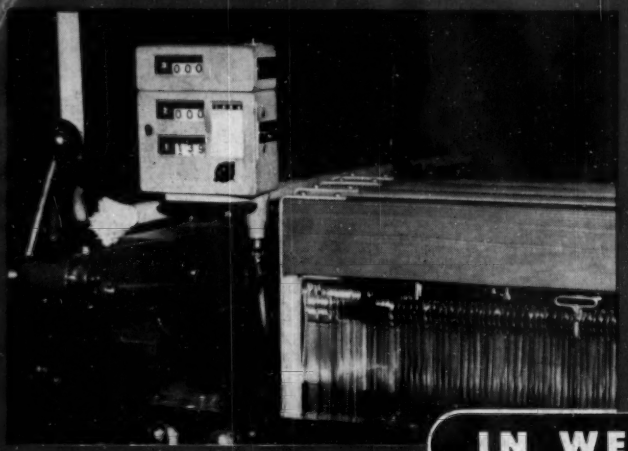

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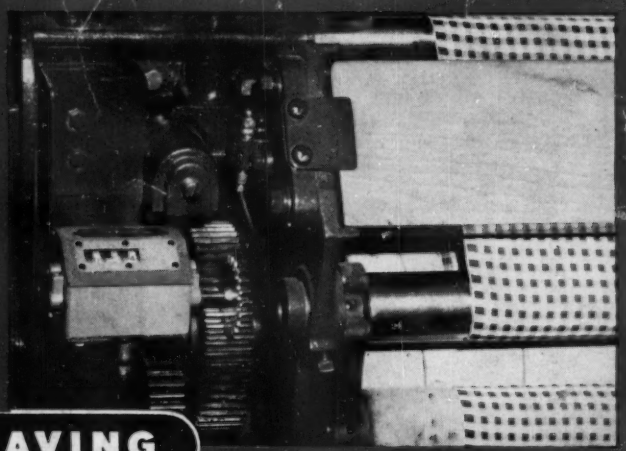

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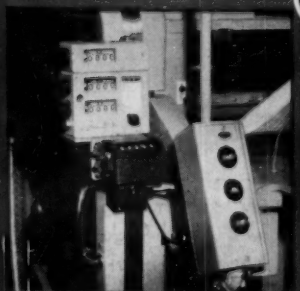

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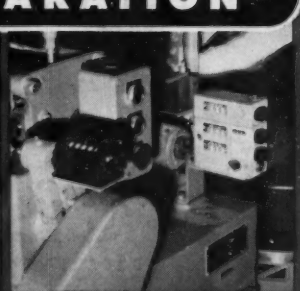
2-3-4 Hank Counter and Predetermining Counter on Drawing Frame



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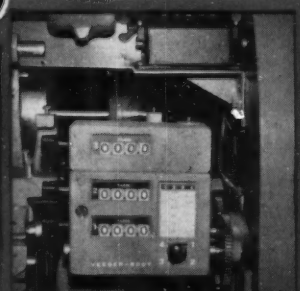

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